MEDICAL TOPOGRAPHY

AND

STATISTICS

OF THE

PRESIDENCY OF MADRAS.

COMPILED FROM THE RECORDS

OF THE

MEDICAL BOARD OFFICE.

VOL. I.

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Plan
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TOWN OF MADRAS
and its Limits.
Furlongs 8 7 6 5 4 3 2 1 0 1 Mile
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Peramboor
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From Red Hills
Powder Mills
Vanarpetta
Tandiarpett
Tandiarpett
Royapooram
BLACK TOWN
Sea Custom House & Town Police.
Supreme Court.
Arbuthnot & Co.
Binny & Co.
Granary
Parry & Co.
Company's Petta
Shulay
Vepery
Pursewaukum
Kilpaukum
FORT ST. GEORGE
Perumaloo
Female Asylum
From Poonamallee
Egmore
Chintadrapettah
Island
Statue of Sir Thomas Munro
Chetput
Coovum River
Governor's Garden.
Nabob's Palace
Nungumbaucum Tank
Nungumbaucum
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Adyar River
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1 Roman Catholic Church, Royapooram.
2 Monegar Choultry.
3 Canal Basin.
4 Mint.
4½ Native Vet. Bat. lines.
5 Black-Town Chapel and School.
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7 Roman Catholic Cathedral, Black-Town.
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13 Medical School.
14 Lunatic Asylum.
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16 Vepery Mission Church.
17 Gun Carriage Manufactory.
18 St. Andrew's Church.
19 Military Male Orphan Asylum.
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21 St. Mary's Burial Ground.
22 St. Mary's Bridge.
23 Wallajah Bridge.
24 Sir T. Munro's Statue.
25 Camp Equipage Depôt.
26 Government Bridge.
27 Body Guard Lines.
28 St. Andrew's Bridge.
29 Madras University.
30 Land Custom House.
31 Munro's Bridge.
32 College.
33 College Bridge.
34 Commander-in-Chief's Residence.
35 Commander-in-Chief's Bridge.
36 Government Dispensary.
37 Club House.
38 St. George's Cathedral.
39 Horticultural Society's Gardens.
40 Cenotaph.
41 St. Thomé Cathedral.
42 Observatory.
43 Perambore Barracks and Lines.

ELEVATION OF SOME OF THE PRINCIPAL STATIONS CIVIL AND MILITARY, IN THE VARIOUS DIVISIONS OF THE MADRAS PRESIDENCY.

	Feet.		Feet.
Wallajabad	300	*Bangalore*	3000
Vellore	676	*Mysore*	2500
Arcot	558	*Seringapatam*	2308
Nellore	80	*Bellary*	1600
Chittoor	1100	*Gooty*	1260
Trichinopoly	250	*Kurnool*	900
Salem	907	*Adonie*	1400
Dindigul	700	*Cuddapah*	480
Madura	600	*Secundrabad*	1850
Palamcottah	209	*Jaulnah*	1650
Paulghaut	800	*Nagpore*	932

N. B.—The several Stations along the Eastern and Western Coasts are very little raised above the level of the Sea.

PREFATORY REMARKS BY THE MEDICAL BOARD.

The Supreme Government having called upon the Medical Board for information on the Medical Topography of India, they consider a few preliminary observations necessary in order to explain the circumstances under which the reports for this Presidency have been drawn up, and the cause of the delay experienced in carrying into effect the orders of Government in a satisfactory manner.

The records of the Medical Board Office were known to contain a large and valuable collection of topographical and statistical information, but the various documents were so incomplete as to render it necessary to make a further reference to the Medical Officers of the Establishment. Every Medical Officer throughout the country was, accordingly, required to furnish a report of the District, Station, or Cantonment in which he then served, or of any other with which he was best acquainted.

The additional documents thus procured were, however, still so defective that a series of complete reports by individual Medical Officers, could not be selected for publication. The Medical Board, therefore, with a view to fulfil the wishes of Government, propose to compile from the whole of the records at their disposal, a general Topographical and Statistical account of each of the Military Divisions of this Presidency, to be comprised in ten numbers. The proposed series will also include a report on the hill countries of Coorg and the Neilgherries, as well as one on the Tenasserim provinces and the Eastern settlements.

In preparing the reports for the Press it was necessary to alter and modify the language and arrangement of the original text considerably. But care has been taken to give the opinions of the authors on professional points, as nearly in their own words as possible. Hence a diversity of style, and certain defects and inaccuracies, arising from these causes, may probably be observed.

Tables of *Disease* and *Mortality*, both of the Civil and Military departments, for Europeans and Natives, will be annexed to the reports. This part of the work, drawn up from returns in the Medical Board Office will be found to contain much valuable information.

In drawing up the reports for publication, it was, in some instances, difficult to avoid repetitions. This was more especially the case with those of the Southern, Mysore, and Canara Divisions in which the same information may be found in more than one of the reports. But it will be seen that such repetitions could not be avoided without rendering some of them imperfect.

The time of the Secretary to the Medical Board, on whom the duty of preparing the reports devolved, being much occupied with the ordinary business of his office, it became requisite to employ an assistant in arranging the work for publication ;—Dr. Lorimer, Garrison Assistant Surgeon of Fort St. George, was accordingly selected for that purpose ; and it is but justice to state, that notwithstanding his other professional avocations he has for the last three years zealously afforded his gratuitous aid to the Secretary,—and the numerous tables of diseases already alluded to, were framed by Dr. Lorimer,—a labour in itself of no ordinary magnitude.

In conclusion the Medical Board acknowledge their obligations to Mr. Chamier, Chief Secretary, for several valuable reports and other papers containing much statistical and

general information. They are also indebted to Lieutenant Colonel Strahan, Quarter Master General of the Army for the comprehensive map of Southern India prefixed to the Presidency report, which was prepared by his order expressly for this work.

By order,

GEORGE PEARSE, M. D.

Secretary Medical Board.

Fort St. George,
MEDICAL BOARD OFFICE.
15*th November*, 1842.

INTRODUCTION.

The Madras Presidency comprises the southern and eastern portions of the peninsula of India. In figure it is somewhat triangular, and lies between the 8th and 22nd degrees of North latitude, and the 75th and 85th degrees of East longitude. It includes the dominions of the Rajah of Nagpore,—of the Nizam or Soobah of the Deccan,—of the Rajah of Mysore, and those of some other native chiefs of smaller extent. Its greatest length and breadth are respectively, about 800 and 450 miles, forming an area computed at 290,000 square miles. On the North, or base of the triangle, it is bounded by Hindostan proper,—on the South, at Cape Comorin, by the Indian Ocean and Gulf of Manaar,—on the East, by the Bay of Bengal,—and on the West by the Indian Ocean and the Bombay Presidency.

The general aspect of the country on the eastern coast, is that of a level sandy plain, with hills rising at the distance of from 30 to 60 miles inland, which form the line of eastern Ghauts, and run south-westerly in an oblique direction from Ganjam to Cape Comorin. A similar chain of mountains called the western Ghauts, runs along the west coast, from the Concan in the Bombay Presidency to Cape Comorin, where they unite with the eastern range. The western range is within the average distance of about half a degree from the sea, though occasionally it approaches much nearer to the coast. The ascent to these hills is so remarkably abrupt, particularly from the coast side, as to render them nearly inaccessible, except at a few natural openings or defiles which will be more particularly described hereafter. In this range is situated the celebrated Neilgherries or Blue Mountains of Coimbatore, and the elevated country of Coorg.

The centre of the peninsula includes the Table lands of

Mysore, a country having a mean average height of 3,000 feet;—the Ceded Districts, an irregularly mountainous country with a mean height of 1,600 feet above the sea;—the Deccan or Hyderabad country, (abounding with hills and rocks, of primitive formation,) the average elevation of which is 1,900 feet;—and Berar, in which is included the country of Nagpore, having numerous fertile alluvial plains, with large tracts of unreclaimed and uninhabited jungle, and ranges of barren mountains, of moderate elevation.

The peninsula of India being situated within the tropics, the territories it comprises are necessarily exposed to high solar temperature. The heat, however, is, in many situations, very considerably mitigated by elevation and proximity to the sea. These regions are also exposed to the influence of the periodical winds or monsoons, which greatly modify the heat and moisture incident to the climate.

The monsoons are called the North-east and South-west, and are attended by the periodical rains; the former, which exerts its influence chiefly on the eastern coast, commences usually in October, and continues till December, when the rains cease, and the wind becomes dry and parching. The South-west monsoon which begins in May, continues till August or September, and is felt chiefly on the Malabar coast and western parts of the country. At other seasons of the year the winds are variable, but for the most part southerly, from March till May, i. e., from the termination of one monsoon, till the commencement of the other. A more particular account of the climate will be found in the reports of the several divisions and stations.

The Madras presidency with the exception of the settlements eastward of the Bay of Bengal, includes the following military sub-divisions, viz. the Presidency Division,—the Centre do.—the Southern do.—the Provinces of Malabar and Canara,—the Mysore Division,—the Ceded Districts,—the Northern Division,—the Hyderabad do.—and the Nagpore Division.

The boundaries and relative situation of each may be traced on the annexed map. The diseases peculiar to the various parts of the country will be particularly noticed in the several divisional reports; for, the varieties of climate to be met with produce, as might be expected, a corresponding difference in the nature and character of the prevailing diseases.

The following Table of diseases exhibits at one view, the total of admissions into hospital,—the nature of the diseases, and the number of deaths for a period of ten years for Europeans and Natives; and therefore affords data for comparing the influence of climate on both, as well as the relative healthiness of the several divisions of the Army.

General Table exhibiting the total number of Admissions and Deaths in the Madras Army, during a period of ten years from 1829 to 1838.

EUROPEAN TROOPS. Aggregate Strength 103,431.	Admissions and Deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	„ continued.	„ intermittent.	„ remittent.
Total Admissions	186,865	205	106	61	2,833	846	3,263	8,069	17,442	0	2,195	16,829	13,264	4,336
Total Deaths	4,725	118	30	16	770	1	54	159	1,382	0	8	203	134	153
Average Annual percentage of Sick to Strength	180 ·666	·198	·102	·058	2 ·739	·817	3 ·154	7 ·801	16·863	0	2 ·122	16 ·270	12·824	4 ·192
Average Annual percentage of Deaths to Sick	2 528	57 ·560	28 ·301	26 ·229	27 ·179	·118	1 ·654	1 ·970	7 ·923	0	·364	1 ·206	1 ·010	3 ·528
Average Annual percentage of Deaths to Strength	4 ·568	·114	·029	·015	·744		·052	·153	1 ·336		·007	·196	·129	·147
NATIVE TROOPS. Aggregate Strength, 568,403.														
Total Admissions	347,327	148	926	1,804	5,346	12,991	101	9,010	5,506	12	29,444	4,752	95,354	8,046
Total Deaths	9,121	102	180	252	2,413	10	8	453	587	1	135	246	1,381	361
Average Annual percentage of Sick to Strength	61 ·105	·026	.162	·317	·940	2 ·285	.017	1 ·585	·968	·002	5 ·180	·836	16·775	1·415
Average Annual percentage of Deaths to Sick	2 ·626	68 ·918	19 .438	13 ·968	45 ·136	·076	7 ·920	5 ·027	10 ·661	8 ·333	·458	5 ·176	1 ·448	4 ·486
Average Annual percentage of Deaths to Strength	1 ·604	·017	·031	·044	·424	·001	·001	·079	·103		·023	·043	·242	·063

EUROPEAN TROOPS. Aggregate Strength 103,431.	Guinea worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small Pox.	Syphilis.	Thoracic diseases.	Ulcer phagedenic.	Wounds and Injuries.	Other complaints.
Total Admissions	55	11,251	274	1	7,049	10,687	12	21,450	6,696	25	14,630	45,286
Total Deaths	0	545	18	0	6	93	2	63	316	2	53	599
Average Annual percentage of Sick to Strength	·053	10 ·877	·264	0	6 ·815	10 ·332	·011	20 ·738	6 ·473	·024	14 ·144	43 ·784
Average Annual percentage of Deaths to Sick	0	4 ·844	6 ·569	0	·085	·870	16 ·666	·293	4 ·719	8 ·0	·362	1 ·322
Average Annual percentage of Deaths to Strength		·526	·017		·005	·089	·001	·060	305	·001	·051	·579
NATIVE TROOPS. Aggregate Strength, 568,403.												
Total Admissions	1,012	487	718	17	7,221	29,214	415	11,657	4,998	52	25,845	92,251
Total Deaths	2	62	39	1	15	443	42	91	593	7	138	1,559
Average Annual percentage of Sick to Strength	·178	·085	.126	·002	1 ·270	5 ·139	·073	2 ·050	·879	·009	4 ·546	16 ·229
Average Annual percentage of Deaths to Sick	·197	12 ·731	5 ·431	5 ·882	·207	1 ·516	10·120	·780	11 ·864	13 ·461	·533	1 ·689
Average Annual percentage of Deaths to Strength		·010	·006		·002	·077	·007	·016	·104	·001	·024	·274

Table shewing the number of Admissions and amount of Mortality from the most particular Diseases, amongst both European and Native Troops, in all the Divisions of the Presidency, during the period of ten years, from 1829 to 1838, inclusive, with the Proportion each bears to the Total number of Admissions and Deaths; the contrast in these respects in several of the columns of Diseaes between the European and Native Sick, is very remarkable.

	Cholera.		Fever.		Dysentery.		Hepatitis.		Diarrhœa.		Thoracic diseases.		Rheumatism.		Syphilis.		Total from these diseases.	
	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.
Europeans.																		
Total Admissions..186865	2,833	$\frac{1}{66}$	36,624	$\frac{1}{5}$	17,442	$\frac{1}{11}$	11,251	$\frac{1}{16}$	8,069	$\frac{1}{23}$	6,696	$\frac{1}{28}$	10,687	$\frac{1}{17}$	21,450	$\frac{1}{8}$	115,052	$\frac{8}{13}$
Total Died...... 4,725	770	$\frac{1}{6}$	498	$\frac{1}{9}$	1,382	$\frac{1}{3}$	545	$\frac{1}{8}$	159	$\frac{1}{29}$	316	$\frac{1}{15}$	93	$\frac{1}{51}$	63	$\frac{1}{75}$	3,826	$\frac{4}{5}$
Natives.																		
Total Admissions.347,327	5,346	$\frac{1}{65}$	137596	$\frac{2}{5}$	5,506	$\frac{1}{63}$	487	$\frac{1}{713}$	9,010	$\frac{1}{38}$	4,998	$\frac{1}{69}$	29,214	$\frac{1}{12}$	11,657	$\frac{1}{29}$	203,814	$\frac{16}{27}$
Total Died 9121	2,413	$\frac{1}{4}$	2,123	$\frac{1}{4}$	587	$\frac{1}{15}$	62	$\frac{1}{147}$	453	$\frac{1}{20}$	593	$\frac{1}{15}$	443	$\frac{1}{20}$	91	$\frac{1}{100}$	6,765	$\frac{4}{5}$

The following Table further exhibits the Annual Percentage of Admissions to the Strength; of Deaths to the Sick treated and the Percentage of Mortality to the Strength; it also exhibits the Difference amongst European and Native Sick in these respects.

	Cholera.		Fever.		Dysentery.		Hepatitis.		Diarrhœa.		Thoracic diseases.		Rheumatism.		Syphilis.		Total from these diseases.	
	Adm. and Deaths.	Percentage.	Adm. and Deaths.	Percentage.	Adm. and Deaths.	Percentage.	Adm. and Deaths.	Percentage.	Adm. and Deaths.	Percentage.	Adm. and Deaths.	Percentage.	Adm. and Deaths	Percentage.	Adm. and Deaths.	Percentage.	Adm. and Deaths.	Percentage.
European Strength 103431																		
Percentage of Sick to Strength	2,833	2 ·739	36,624	35 ·409	17,442	16 ·863	11,251	10 ·877	8,069	7 ·801	6,696	6 ·473	10,687	10·332	21,450	20 ·738	115,052	111 ·235
do. of Deaths to Sick	770	27 ·179	498	0 ·266	1,382	7 ·923	545	4 ·844	159	1 ·970	316	4 ·719	93	0 ·870	63	0 ·293	3,826	2 ·047
do. of deaths to Strength.	770	0 ·744	498	0 ·481	1,382	1 ·336	545	0 ·526	159	0 ·153	316	0 ·305	93	0 ·089	63	0 ·060	3,826	3 ·699
Native Strength..568,403																		
Percentage of Sick to Strength	5,346	0 ·940	137596	24 ·207	5,506	0 ·968	487	0 ·085	9,010	1 ·585	4,998	0 ·879	29,214	5 ·139	11,657	2 ·050	203,814	35 ·769
do of deaths to Sick	2,413	45 ·136	2,123	0 ·611	587	10 ·661	62	12 ·731	453	5 ·027	593	11 ·864	443	1 ·516	91	0 ·780	6,765	1 ·948
do. of deaths to Strength.	2,413	0 ·424	2,123	0 ·373	587	0 ·103	62	0 ·010	453	0 ·079	593	0 ·104	443	0 ·077	91	0 ·016	6,765	1 ·190

MADRAS,

Situation. The capital of the Presidency of the same name, is situated on the coast of Coromandel, in Latitude 13° 6 North, and Longitude 80° 21 East.

The town of Madras and its limits within the jurisdiction of the Supreme Court, is from 7 to 8 miles in length, extending along the coast from the Adyar river on the south, to Tandiavoodoo on the north; and averages in breadth, from three to four miles inland. It is bounded by the sea on the entire of its eastern face, on the south by the Adyar river, and on the north and west by the Chingleput district, and the extensive sheets of water called the Long and Nungumbaucum tanks. The site of Madras is a perfectly flat sandy plain, but little elevated above the level of the sea, presenting no natural eminences of any description.

The nearest hills or elevated land are those of the Mount and Palaveram to the south-west, distant 8 and 10 miles respectively; and the Pulicat hills distant from 25 to 30 miles, in a northerly direction.

There are several extensive tanks in and about Madras, which for the most part are shallow, and become completely dried up during a great portion of the year, when their beds are partially cultivated as rice ground, and are also used for grazing cattle; these localities however do not appear to be productive sources of malarious disease.

General description of Town. The town properly so called is somewhat of a square form, and extends along the beach to the northward nearly one mile, and is enclosed on that and its west side by a strong wall, in former days fortified.

Fort Saint George is situated at the distance of about half a mile due south; and the villages of Royaporum, Vepery, Chintadrapettah, Poodoopettah, Egmore, Triplicane, Royapettah, and Saint Thomé, which have gradually risen up to the north, west, and south of the town, are now included under the same cognomen; with these it has an irregular shape, and is from ten to twelve miles in circumference; with a population variously estimated, but generally believed not to be under three hundred and fifty thousand souls.

Extent and Population.

Black Town.

The Black-town, or that part of Madras within the walls, lies very low, being in some places only six inches above the level of the sea at spring tides, against the inroads of which it was found necessary several years ago to protect it, by a strong bulwark of stone; its population amounts to upwards of 100,000 persons, chiefly natives, and of various castes, with a small proportion of Indo-Britons, and a few Europeans.

Three broad streets intersect the town, running north and south, dividing it into four nearly equal parts; these streets are respectable in appearance, well built, and contain many terraced, upstair houses; the principal European shops; the Supreme Court Jail; the Black Town, Male and Female, Orphan Schools; and on the beach, parallel with these streets, is a line of public offices, including the Supreme Court, the Custom House, the Marine Board Office, and also the Offices and Store houses of the principal European merchants; these are well finished buildings, having colonades to the upper stories, supported on arched bases, and plastered with shell mortar, forming a hard, smooth and polished surface, resembling white marble, when recently laid on.

The minor streets, occupied chiefly by natives, are numerous, irregular and of various dimensions, many of them extremely narrow, and ill-ventilated; the construction of the houses is also very variable, but the great majority have walls

of brick and clay chunamed over, with tiled roofs. The form of the native houses so general throughout India, is very commonly preserved here, viz. that of a hollow square, with the rooms opening into a court yard in the centre, entered by one door from the street, and seldom having any other opening outwards, on the ground floor; this effectually secures the privacy so much sought after by the natives, but at the same time, it interferes with proper ventilation, and on the occurrence of any epidemic, or contagious disease, must favor their extension, and increase the number of the victims.

Drains. The streets, with few exceptions, have drains on both sides, which are narrow, deep and open; they are cleared out every morning, and the contents removed by carts; the levels of some of them however have been imperfectly taken, rendering it difficult to prevent stagnant offensive matter from accumulating. There are three common sewers into which the smaller drains empty themselves, two of them running from the eastern part of the town, in a direct course to the sea; one is entirely open, the other partly covered; the third and the largest is placed in the principal street, the centre and lowest part of the town, and proceeds along its whole length, from north to south; this drain which is partly open, and partly covered, empties itself into the Cooum river near the Fort. These drains though daily attended to, and kept tolerably free from accumulation, not being floored with stone, and there being moreover but very little slope, offensive slimy matter collects in them, which is with difficulty removed. The effluvia arising from these drains is a source of continual complaint by those residing in their immediate neighbourhood, and must be detrimental to health; indeed remittent fever is not unfrequent in this part of the town, and is occasionally, it has been said, of a very bad type. The nuisance might be in a great measure remedied, by obliging the inhabitants to throw chatties of water into the drain opposite their houses daily, which would help to wash away the mud deposited in them, but the evil can only be ef-

fectually removed by having them floored with solid masonry, and constructed of an oval shape; a greater fall might be secured by having the head of the drains, somewhat more raised; the subject of improving their construction has for some time past been under the consideration of the authorities.

Water. The town is amply supplied with water, of a remarkably pure and good quality, from wells varying in depth from twenty to thirty feet. The water obtained from the wells in a certain enclosure near the north wall, known by the name of the "seven wells", is especially valued for its purity, which it is said by sea-faring people to preserve for a length of time at sea. Public water works have been erected in this enclosure by government, and two reservoirs have been constructed, one in the fort, the other midway between the fort and the town, which are daily filled from the wells by means of metal pipes: the shipping, and all the inhabitants who choose to send for it, are supplied from these sources.

The purity and wholesomeness of this water, seem to depend on its being filtered through a bed of fine sand, consisting almost entirely of quartz, which extends several miles in length in a northerly direction, but is not more than three or four hundred yards in breadth, its depth varying from one to fifteen feet; in some places the bed of sand is found near the surface, and in others it is covered to a considerable depth, with red clay and sand. It has been found, in digging wells in this stratum of sand, that if it be passed through, the water obtained below is of an inferior quality, and frequently brackish.*

On the north, west, and south sides of the town, is an open space of ground, or esplanade, separating it from the fort. The north esplanade is in a very filthy state from being the resort of natives every morning and evening, so also is the

* It may be mentioned here that the fine polish of the plaster, in the buildings of Madras, is obtained by the admixture of this pure sand with shell mortar.

west, along which a canal runs parallel to the wall at the distance of forty or fifty yards, the banks of which are also resorted to as a *place d'aisance* by multitudes of natives.

The following is a concise description of the different villages, which now form part of this extensive town.

Royapooram. Royapooram is situated outside the walls, on the north side of Black-town, at the distance of about a quarter of a mile, and extends for one mile along the beach. The inhabitants are chiefly fishermen and boatmen, amounting to about 8,000, they are persons of low caste, many being roman catholic christians; they live in huts of an inferior description, having mud walls, and cadjan (dried palmira leaves) roofs; the lanes and streets are very narrow, and unprovided with drains, so that there is a collection of filth, at almost every door. Scavengers are not employed in this district, and the space of ground between the town wall and the village is used as a necessary by the natives, and as a receptacle for the contents of the scavenger's carts from the town. From their filthy condition and the poverty of the inhabitants disease, when it appears in an epidemic form in Madras, invariably causes great havoc in this village; from the manner in which most of the people live, (for here poverty and vice truly go together) their families are badly clothed and fed; and their children are observed to be small and unhealthy; and it is calculated that two-thirds of them die before the age of maturity. The most prevalent forms of disease are *fever, dysentery, diarrhœa, and scrofula*; and from their being exposed so much to the glare of the sun on the water, the boatmen very generally, have defective vision, their eyes becoming *amaurotic*, or *cataractous*, at an early period.

Vepery, including the village of Pursewakum. These villages lie to the west of Black-town being separated from it by a spacious open esplanade about half a mile wide; the principal streets are well built, provided with drains, and kept clean, but the cross streets and lanes are close and often filthy.

One of the native regiments of the garrison is stationed in Vepery; a description of the lines or hutting ground &c. will be given hereafter.

Chintadra-pettah. This village adjoins Vepery, being separated from it only by the river Cooum, a bend of which almost encloses Chintadrapettah. The inhabitants are principally hindoos. The houses in Chintadrapettah are regularly built in streets, with drains on each side, and the village generally, has a cleanly appearance, except in the out-skirts.

A public dispensary, described in another place, is situated in this part of the town; and the return of diseases there given, shows the nature of the various distempers generally prevailing throughout Madras. The populous villages of Poodoopettah and Egmore, lie nearly due west of Chintadrapettah; the former being on the opposite bank of the river, and the latter at the distance of about half a mile west of Poodoopettah.

Triplicane and Royapettah. Triplicane, a very large village or town, runs parallel with the sea about one mile south of the fort, from which it is separated by the esplanade, the Cooum river, and the government gardens. It is distinguished by being the seat of His Highness the Nabob of the Carnatic, the palace being situated at the north-east part of the town, close to the sea beach. Government House adjoins the palace, the parks being only separated by a wall.

The inhabitants are chiefly mahomedans, most of whom are followers, or in the service, of the Nabob.

The principal streets are clean and wide, having drains at either side; but the back streets are confined, and many of them without drains, they are filthy and offensive, and it has consequently been observed that when epidemic diseases appear, the inhabitants of these localities suffer considerably more than those in other situations. Westward of Triplicane, and nearly adjoining to it, is situated the extensive

and populous village of Royapettah; which is inhabited by a mixed population consisting of mahomedans, hindoos, and indo britons.

Saint Thomé

Saint Thomé, another village included under the general cognomen of Madras, lies about three miles to the southward of the fort close to the sea; and is called by the natives Mylapore, or "the city of peacocks." The inhabitants consist of hindoos, mahomedans and roman catholic christians, these last being a very dark complexioned race between portuguese and natives. The parts laid out in streets are generally clean, and in good order: there are several extensive cocoanut and plantain gardens in the vicinity, and some unappropriated or waste ground, both in and around the village, which give it a straggling and unconnected appearance; the situation of the village however, close on the sea beach, is considered favorable for european convalescents, and from its salubrity, it has for many years past been resorted to by sick officers from inland stations, for whose accommodation a number of convenient houses have been built on private speculation.

Garden houses or residences of the principal european inhabitants.

The garden-houses of the principal european residents are situated in separate plots of ground called compounds, and extend from three to four miles inland. They are generally of two stories, constructed in a pleasing light style of architecture, terraced with porticoes and verandahs supported by pillars. The lower story is often raised several feet from the ground; the doors and windows are large, and provided with venetian blinds so as to admit free ventilation; and the apartments are lofty, spacious and airy.

During the prevalence of the hot winds, tatties made of the root of the cussa or kuskus, a sweet smelling grass, are placed at the doors and windows, on the western side of the house, and kept wet, whereby a cool refreshing air blows gently

through the apartments; and by these means with the aid of the punkah, the extreme heat is moderated.

The compounds are usually planted with trees and shrubs, and when viewed even from a height, the tops of many of the houses only can be seen; these plantations interrupt due ventilation, but the evil is tolerated, in consideration of the protection they in a great measure afford, from the clouds of dust arising from the public roads and parched sandy soil, during a great part of the year.

Groups of native huts are seen interspersed here and there, in the vicinity of the garden houses.

Population. No census has ever been taken of the population of the several villages above described, and no records of births or deaths are kept; it is however generally supposed as already stated, that including Black-town it cannot be under 3,50,000 souls.

The construction of the native houses in general is similar to those of black-town, most of them are built of mud or mud and bricks, and roofed with cadjan leaves, presenting a mean appearance.

Wells. Wells are numerous in every part of Madras though the water of many of them is brackish and not drinkable, being only used for washing, cooking, &c.; there are however several which afford an ample supply of good water. In digging wells the upper part of the soil is found to be sandy, to the depth of several feet, a bed of clay is then met with mixed with reddish sand, and broken down sea shells extending to a great depth. Much doubt is always experienced as to the nature of the water which may be found; fresh, salt, or brackish springs, not unfrequently being contiguous to each other, a circumstance not depending on the depth to which the wells are sunk.

Tanks. Besides wells, tanks are also numerous, and some of them very extensive such as the Long tank, and Spur tank; a few contain good water derived from springs, but most of them are filled by the rains during the monsoon, and only answer for partial irrigation, becoming dried up as the hot season approaches; many have been neglected for several years and allowed to become filthy, from cattle being washed in them, and their banks being used as necessaries; thus causing a nuisance much complained of, and there can be no doubt that in place of being useful or beneficial, they are prejudicial to the health of the inhabitants in their vicinity.

It may be mentioned here that the use of the brackish water found throughout Madras, excites cutaneous eruptions of a troublesome nature, and not unfrequently fever, and strangers resorting to Madras whether Europeans or natives, are liable to be affected by it.

Food of Native population. The staple article of food is rice, eaten either with curry, *tyre, butter-milk, saltfish, chatney, chillies or some condiment. Natives usually take three meals in the twenty-four hours, the first early in the morning; the second at 2 or 3 P. M.; and the third or supper, at 7 or 8 P. M.; and but little animal food is used except by the mahomedan part of the inhabitants, who are generally more robust and of stronger constitutions than hindoos; various descriptions of inferior grain are used by the poor. Rice is brought from a distance both by sea and land, but vegetables are grown in great abundance in the immediate vicinity of Madras, such as onions, bendies, brinjals, cucumbers, gourds, and many different kinds of greens.

The lower orders are much addicted to the use of spirituous liquors and fermented toddy; opium eating, and smoking are also common amongst mussulmans, who smoke several kinds of narcotic drugs in their hookahs.

* Milk coagulated and slightly acidulous

Police. Madras has a regularly constituted Police establishment, under the regulations of which department the town has in many respects much improved.

The establishment is exclusively composed of natives called *peons*, placed under european superintendence and formed into six divisions; one being placed in Black-town, and one in each of the principal villages above described.

The common sewers, drains and streets of the several divisions are kept tolerably clean by the police with the aid of the Assessment department, and all encroachments upon the public streets, such as small huts, pandals, verandahs, &c. tolerated in former years, have been removed, and are now strictly prohibited. The drains have also been much improved of late years, though as already mentioned, owing to the low site of Madras generally, much difficulty exists in rendering them thoroughly efficient.

The erection of public necessaries in order to prevent the inhabitants resorting to the receptacles already mentioned, is a desideratum, and would add not only to the health, but also be conducive to the comfort of the people. It is understood to be in contemplation to erect three of these buildings, one at Vepery, one at Peramboor, and one at the north side of Black-town.

Markets, provisions, &c. It would appear that the Police have but little control in superintending the supply of native provisions, exposed for sale, although their interference is occasionally much required, as the people are generally so blinded by custom, that they continue to use the same food they have been accustomed to, although their neighbours and friends may be suffering from its deleterious effects. The truth of this statement was particularly remarked in 1837, and fatal consequences were not unfrequently noted; a particular sort of cheap rice having been exposed for sale, was eaten by the lower orders, though all the people acknowledged it caused bow-

el complaints, which in many instances terminated in cholera. There are also several kinds of fish, which at particular seasons, are known to be unwholsome, but which are eaten, although the people are well acquainted with the bad effects resulting from their use.

The European markets and slaughter houses are more under the control of the police, and are well regulated, and kept tolerably clean. They are supplied abundantly with beef, mutton, veal, kid, &c. of a fair quality, and at moderate prices, (the animals are generally slaughtered over night;) fowls, capons, turkies, ducks, geese, &c. are also plentiful. There is also an ample supply of excellent fish, of different kinds; and vegetables of various sorts, such as potatoes, turnips, peas, carrots, cabbages, knolkole, beans, greens of several varieties, sweet potatoes, yams, onions, and sallad; the potatoes are imported from Bangalore and other parts of Mysore, where they grow in perfection. The market is also well supplied with various kinds of fruit, as mangoes, plantains, pine-apples, custard-apples, oranges, grapes, jack fruit, guavas, &c. and many others less esteemed.

Public houses.

The licensed public houses, are also under the *surveillance* of the police, and are restricted to particular localities, the owners being liable to punishment for misconduct, or breach of the regulations.

Climate.

Before entering on a particular description of the climate of Madras, it may be necessary to premise a few general observations on that of Southern India.

Monsoons.

Like other tropical countries the Indian peninsula is within the influence of the trade winds, or as they are here called monsoons. These monsoons, or prevailing currents of air, are supposed to be the effect of the colder air from the opposite sides of the equator to that in which the sun is situated, rushing to supply the place of the highly

rarified air surrounding the tropical continents, the temperature of which is greatly increased at that period. The perfect clasticity of atmospherical air enabling it to keep up an equilibrium notwithstanding the powerful effect of a tropical sun acting in so extensive a space, as the continents of Africa and Asia.

The wind for a certain period of the year blows from the south-west, and for a certain period from the north-east; the south-west monsoon prevails while the sun is north of the line, the temperature of the continent of India being then higher than that of the ocean, this wind continues from April till October, with more or less regularity as to its commencement, and termination. The North east monsoon which succeeds, sets in about the middle of October, and continues till March; the sun being south of the line, the temperature of the ocean, and of the tropical parts of the African continent are then higher than that of India; the periods at which these monsoons set in, is earlier in the south west monsoon, in the southern parts; and in the northeast monsoon, in the more northern parts of the peninsula. These monsoons are usually ushered in by heavy rains, attended with much thunder, and lightening, and occasionally by severe gales. The north-east monsoon expends its violence chiefly on the Coromandel cost, whereas the South-west monsoon is felt with more severity, on the coast of Malabar.

Land and Sea Breezes.

Besides these annual changes, it is of importtance to notice, that during the hot months especially, when the sun is north of the equator, a diurnal change in the direction of the winds is produced, and which is more particularly experienced in the vicinity of the sea coast, known as the land, and sea breezes. These daily changes of the wind, are explicable on the same principles as those of the monsoons, viz. the rarefaction of the air on the land during the heat of the day, causing a rush of cooler air from the sea to supply its place, whilst a current in the opposite direction, occurs when the sun is below the horizon. The sea

breeze usually commences about noon, or 1 o'Clock P. M. when the sun is nearly vertical for a great portion of the year, and continues till sun set, or later, when it is succeeded by the land wind, which commences towards midnight, and continues till the sea breeze sets in next day; the change from the hot and oppressive land wind, to a cool refreshing sea breeze, (commonly called the *Doctor* from its invigorating eflects,) often occuring with surprising rapidity, and with an interval of not more than from five to ten minutes.

The year admits of a further division into the hot, rainy, and cool seasons; the hot season commencing in March, and continuing till the end of May or June when the rains set in, and last with occasional breaks, or intervals of greater or less duration, till November; after which the weather becomes cool, dry and pleasant, and continues so till the end of February.

Climate of Madras.

During the months of January, and February the weather at Madras is cool and pleasant and this period is considered to be the most healthy season of the year; the mean temperature of these months is 76° of Fahrenheit; the wind blows steadily from N.E. and E. and the average fall of rain is 1 inch, 25 cents. In March, April and part of May the south (or as it is called) the "along-shore" wind prevails, and is reckoned very unwholesome, particularly to old residents, who generally suffer during this time of the year from rheumatic pains; the mean temperature of these months is 85°; and the average of rain 1 inch, 85 cents. In the early part of May, very violent gales of wind have occasionally been experienced, accompanied with heavy falls of rain; about the middle of the month the hot land wind commences, and blows generally with great violence from about midnight till 12, or 1 o'Clock in the day, when it is succeeded by the sea* breeze, which at this season is very refreshing; the land wind continues throughout June and

* The Easterly and South S. E. wind.

July; the mean temperature of these months being 88°; and the average of rain 2 inches, 20 cents. In the beginning of July there are generally heavy showers of rain, which diminish the heat of the land wind, but it continues to blow during the month, though with less violence: mean temperature 85°, average fall of rain 3-37. In the month of August, and September, the weather becomes cloudy, close and oppressive, the sea breeze being uncertain, and the winds generally light and variable, with frequent calms; heavy falls of rain ushered in by thunder and lightning also occur in these months, the mean temperature of which is 84°; and the average of rain 10 inches, 6 cents; it is during these months, that the cholera has generally raged epidemically at Madras. About the beginning of October the N. E. monsoon commences, and continues, through the months of November and December; in October heavy gales of wind are very frequently experienced: the weather is cool and damp, the mean temperature 80°, and the average of rain 30 inches.

Average medium temperature throughout the year, for 10 years.

1829	1830	1831	1832	1833	1834	1835	1836	1837	1838
Fahrenheit. 83	81	81½	84	83	87	82	77½	82½	86½

Hurricanes of frequent occurrence. The coast of Coromandel having from time to time been subject to hurricanes, or violent gales of wind, the most remarkable of which occurred at the following periods,

	A. D.		A. D.
2d October	1746	24th October	1818
21st "	1763	29th & 30th March	1820
5th "	1782	6th December	1827
26th November	1785	30th October	1836
10th & 11th December	1807	1st "	1837
1st & 2d May	1811	11th November	"

it is of importance to attend to the slight fluctuations which occur in the mercury in these latitudes, as indicated by the

Barometer, more particularly at certain seasons; as they have been known to fortell the approach of storms; and such was actually the case, in the severe storm at Madras in October 1836.

On the morning of the 30th October of that year, the Barometer was observed to fall, and become unsteady, and this being considered a certain indication of an approaching gale, due warning was accordingly given to the shipping to quit the roads, and all with one exception having put to sea, escaped the danger of being driven on shore.

The following is a copy of the Meteorological journal, kept at the Madras observatory, during this gale.

				Barometer. Inch.	
29th	Oct.	1836	10 o'Clock A. M.	..30,050	rain.
30th	do.	,,	6 do.	..29,940	brisk breeze.
,,	do.	,,	7 30 do.	..29,864	strong wind at intervals.
,,	do.	,,	12 Noon	..29,707	approaching to a gale.
,,	do.	,,	1 o'Clock P. M.	..29,586	brisk gale.
,,	do.	,,	3 do.	..29,510	at times violent gale.
,,	do.	,,	4 do.	..29,360	very violent gale.
,,	do.	,,	5 do.	..29,150	approaching to hurricane.
,,	do.	,,	7 to 8 do.	..28,915	a violent hurricane.
,,	do.	,,	11 do.	..29,650	very strong wind.

N. B.—The storm was accompanied by very heavy and constant rain; 10 inches having fallen during the 29th, and 30th October.

The annexed statement exhibits the mean monthly range of the Barometer and Thermometer, for the year 1838; as the variations indicated by the former instrument are in ordinary circumstances very trifling, it has not been considered necessary to include the observations of more than one year, in this report.

Meteorological Observations during the year 1838.

	Barometer at			Thermometer at		
	10 A.M.	4 P. M.	10 P.M.	10 A.M.	4 P. M.	10 P.M.
	Inch.	Inch.	Inch.	°	°	°
January, monthly mean........	30,147	30,063	30,118	75,4	77,9	73,4
February do.	30,127	30,040	30,100	78,4	80,6	77,3
March do.	30,073	29,960	30,039	82,9	85,3	80,8
April do.	30,004	29,883	29,968	86,7	88,4	83,9
May do.	29,928	29,817	29,912	88,9	89,6	85,7
June do.	29,868	29,765	29,839	88,5	90,3	86,7
July do.	29,882	29,797	29,865	88,4	91,6	86,7
August do.	29,864	29,767	29,813	85,3	88,9	84,9
September do.	29,913	29,837	29,901	86,8	89,1	84,7
October do.	30,027	29,962	30,013	83,3	85,4	81,9
November do.	30,049	29,974	30,030	78,7	80,0	77,9
December do.	30,106	30,028	30,087	77,6	79,1	76,7

Endemic diseases, Fever. *Fever* of the intermittent, and remittent types, may be said to be endemic amongst the natives of Madras; neither of which however have prevailed to any extent during the last seventeen years; these fevers are attributed by the medical officer, who has been in charge of the Black-town, during the whole of that time, to the imperfect manner in which it is drained: the greatest number of cases have always been observed to occur about the centre of the town (where the drainage is most stagnant), during the hot season of the year.

Leprosy. *Lepra* is likewise endemic, being very common, and supposed by the natives to be both contagious and hereditary; it is also considered by them, to be a direct manifestation of the anger of the deity. This disease is very generally seen amongst the poorest classes of natives, both hindoos and mahomedans; it is but rarely observed before puberty, but both sexes are equally liable to it.

Elephantiasis. *Elephantiasis,* the leprosy of the Arabians, is considered to be a species, or variety of the last named disease, and is another endemic on this part of the coast. It is said by the natives not to be infectious; but they believe it to be hereditary; and like lepra, the poorer classes of peo-

ple seem to be most obnoxious to its attacks, being seldom seen in those who are well fed and clothed; and though exceptions are occasionally met with, innutritious diet and filthy habits, are believed to favor its development. The feet, legs and scrotum, are the parts usually affected with this disease.

For further remarks on elephantiasis, see Southern Division, district Cochin, where it is so very prevalent, as to be designated the "Cochin Leg."

Guinea Worm.

Guinea Worm has been observed to occur annually for the last six years in the villages of Chintadrapettah, Vepery, and Perambore ; it was not seen in any of these places prior to that period, but the numbers affected have since been on the increase; it usually prevails in the months of February, March, April, May and June. The water which is used by the inhabitants of these parts of the town, both for drinking, and for the purposes of ablution, is the same to which they have been accustomed for many years past. Guinea worm has been met with equally in Indo-britons, and in the natives resident in these villages, but is more rarely seen in Europeans.

Cholera.

Cholera.—This disease which for a considerable time past has been of annual occurrence, in some years prevails to a considerable extent; and is attended with its usual formidable mortality. The greatest number of attacks have always taken place amongst the poorest classes of people; and the per centage of mortality has also been observed to be greatest amongst them ;—it generally makes its appearance, towards the end of the hot, and beginning of the wet-season, continuing with more or less severity during the months of August, September and October, and in some years till January.

Small Pox and Vaccination.

Small Pox occasionally prevails epidemically, though much is done to check its progress and extension by the vaccine department. There is

however much indifference on the part of the natives to receive vaccination, and this too, notwithstanding that they are fully aware of its protecting influence, and are encouraged to bring their children to the vaccine depôt by having rice served out to them ; when small pox prevails, the dread of that disease brings them forward, but even then, some prefer small pox inoculation. This prejudice against vaccination arises from apathy, and not from inefficiency as to its antivariolous influence, for here as in Europe, it equally maintains its prophylactic power. The benefits of this department have been greatly extended by the medical subordinates in the regular service being now all instructed in vaccination, and required whether attached to regiments or civil stations, to perform the operation in their immediate neighbourhood, under the superintendence of the medical officers, under whom they may be placed. The additional aid thus given to the vaccine department will be ample, and this measure which has been encouraged by government is expected to be followed by most beneficial results.

Influenza.

Influenza has also visited Madras at times ; the disease is of the same character as seen in other parts of the world ; but is generally mild, and seldom fatal either here or in other parts of southern India.

The tables appended will show the prevalence of the foregoing diseases ; the last mentioned being included under the head of *ephemeral fever*.

Diarrhœa and Dysentery.

Diarrhœa and *Dysentery*, are of frequent occurrence, the former appearing occasionally in an epidemic form, when preceding or following the appearance of cholera.

Native treatment of Disease.

For the cure of leprosy the natives possess no effectual remedies, they prescribe the asiatic pill, composed of arsenic, pepper and the *mudar root, but little

* Aclepias gigantea.

confidence however is placed in it, and they rely more on nutritious diet, than on medicine.

In fever, mercury, arsenic and some febrifuge barks are given, but the efficacy of the latter is doubtful.

Croton appears to be the principal purgative employed by them, and is used in almost every disease; aloes, camboge, senna, and rhubarb, which are procurable in the bazaars, being seldom given.

In cholera the chief remedies are astringents with stimulants, and opium; a combination of pepper and spices has also long been used by native practitioners, and a pill of corrosive sublimate and common salt, forms another favorite remedy.

In small pox, gentle laxatives such as castor oil, with a cooling regimen consisting of cocoanut water, lime juice, and congee water, butter milk, tyre &c. are prescribed, every thing heating being withheld, and the patient kept in a cool apartment. The irritation on the surface, is relieved by the application of plantain leaves smeared with oil.

In diarrhœa and dysentery, chalk combined with spices, black pepper roasted, catechu, opium, the seeds of the poppy, and castor oil, are the chief remedies.

The natives generally are in the habit of using purgatives periodically, as a prophylactic against disease.

The endemic diseases amongst the European part of the population civil and military, described hereafter, are *fever*, *dysentery*, and *hepatitis*, but more especially, the two first.

MADRAS NATIVE INFIRMARY.

This infirmary was established in the year 1799, for the purpose of receiving, and affording medical aid to the native poor of the Presidency.

The Monegar Choultry or Poor Asylum, which was established in 1784, and which has since undergone considerable improvement in its construction, was united with the native infirmary under the sanction of Government in 1809, upon a guarantee in favor of the latter, that its funds amounting to Rupees 54,358 should be transferred to the joint charity, in Government securities, unredeemable.

The hospital and offices form an irregular square, which is divided in its centre by a high wall separating the accommodation for the men, from that of the women. It is a pent roofed brick building, and tiled, with a verandah on the inner side towards the area, and calculated to contain 140 patients; all the wards are well ventilated by doors and windows, and by ventilators in the roof. Attached to it are quarters for the apothecary, an excellent surgery, and a dispensary for issuing medicines to out patients.

Seven cells are appropriated for insane patients, capable of accommodating 14 persons; those for the men and women being in separate areas, and surrounded by walls of sufficient height to render them secure. The institution is well arranged, and appears well calculated in every respect for a native hospital.

A Leper Hospital for Indo-Britons and natives is also attached to this institution, a distinct building surrounded by a wall 12 feet high and capable of containing about 110* patients; the Ennore road passes between it and the infirmary, and its inmates are not permitted to have any intercourse with the patients in the infirmary.

The records of the infirmary, and those of the two dispen-

* 50 Indo-Britons and 60 Natives.

saries, show the nature of the diseases to which the natives of this part of India are subject. To account for the vast mortality which occurs, it is necessary to premise, that disease whether acute or chronic, is frequently allowed by natives to run its course under native treatment, or without applying for aid until it becomes too late to derive benefit from medicine, from their having in many instances an aversion to enter an hospital until all their own resources fail.

The majority of the patients belong to the lowest and poorest classes who, notwithstanding their poverty, will not apply for aid till reduced to the last extremity; the result of treatment cannot therefore be correctly ascertained, nor can it be otherwise from what has been already stated, than unsatisfactory.

During the 12 years from 1827, to 1838 inclusive, 12,446 patients have been treated in this hospital, and the mortality has been in the same period, 3,344; or very nearly 27 per cent, on the number of admissions.

In the year 1833,* which was a year of famine, no less than 5,518 persons were admitted into the infirmary and 1,779 deaths took place; excluding this period the average annual admissions for eleven years, have been 559; and the average annual number of deaths 141; the percentage of deaths, on the number treated, being $23\frac{1}{2}$.

* The highest numbers receiving food from the Choultry at one time, during this year, were as follows:—

At the Choultry Depot	39,017
" Trivatoor do.	31,866
" Aroombakum	9,150
Total..	80,033

and the highest numbers employed on public works exclusive of those fed were,

Under the orders of the Chief Engineer..	16,647
Do. do. Superintending do.	1,500
Under the orders of the Superintendant of Public Roads	1,870
Do. Inspector of Streets and Roads.	2,500
Do. Master Attendant	100
Do. Superintendant Gun Carriage Manufactory	67
Total..	22,684

The following table exhibits the number of admissions and deaths, from each class, and more important species of disease in each half year, for the above period.

MADRAS NATIVE INFIRMARY.

No. 1.—*Table exhibiting the Number of admissions and deaths from each class of Disease for* 12 *years.*

CLASSES.	DISEASES.	From 1827 to 1838. 1st Half. Adm.	1st Half. Died.	2d Half. Adm.	2d Half. Died.	Admissions and Deaths from each Class of Diseases. 1st Half. Adm.	1st Half. Died.	2d Half. Adm.	2d Half. Died.	Total admissions from each Class.	Total deaths from each Class.	Average per centage of deaths to sick.
	Febris Ephemera	175	0	142	1							
	,, intermitt. quot:	4	2	14	0							
Fevers	,, remittens	29	10	76	20	210	12	232	21	442	33	7 ·466
	,, continua	2	0	0	0							
	Cholera	52	29	83	50	52	29	83	50	135	79	58 ·518
	Diarrhœa	284	85	144	28							
	Dysenteria Acuta	10	5	13	3							
	,, Chronica	38	13	60	20							
	Colica	22	0	11	0							
Diseases of the Abdominal Viscera	Obstipatio	20	2	17	1	395	106	268	53	663	159	23 ·981
	Hœmorrhois	4	0	3	0							
	Peritonitis	6	1	2	1							
	Dyspepsia	11	0	18	0							
	Hepatitis Acuta	4	0	3	2	8	1	8	3	16	4	25 ·0
	,, Chronica	4	1	5	1							
	Catarrhus	18	3	15	5							
	Asthma	7	0	9	4							
Do. Lungs	Phthisis pulmonalis	9	6	5	2	37	10	35	12	72	22	30 ·555
	Hœmoptysis	0	0	1	1							

	[illegible]	9	1	17	3							
Do. Brain	Paralysis	27	10	30	7							
	Cephalalgia	7	1	10	0							
	Amentia	146	9	138	11	342	38	360	44	702	82	11 ·680
	Mania	152	16	165	23							
	Hydrophobia	1	1	0	0							
Do. Eye	Morbi Oculorum	9	0	6	0	9	0	6	0	15	0	0 ·0
Do. Skin	„ Cutis	155	5	126	7	155	5	126	7	281	12	4 ·270
Eruptive Fevers	Variola	89	34	263	145							
	Varicella	125	0	13	0	296	35	283	146	579	181	31 ·260
	Rubeola	81	1	6	0							
	Erysipelas	1	0	1	1							
Dropsies	Anasarca	122	71	115	69	137	82	120	72	257	154	59 ·922
	Ascites	15	11	5	3							
Rheumatic Affections	Rheumatismus Acutus	24	2	10	2	283	8	225	13	508	21	4 ·133
	„ Chronicus	259	6	215	11							
Venereal do.	Syphilis Primitiva	14	6	28	3							
	„ Consecutiva	10	6	18	3							
	Gonorrhœa	12	0	17	0	44	12	66	6	110	18	16 ·363
	Hernia Humoralis	8	0	2	0							
	Strictura	0	0	1	0							
Specific Diseases	Atrophia	1348	569	2,569	1,247							
	Beriberi	1	1	9	1							
	Elephantiasis	2	1	3	0	1811	735	3,181	1,451	4,992	2,186	43 ·790
	Lepra	326	141	444	167							
	Dracunculus	10	0	15	1							
	Scrophula	124	23	141	35							
	Phlogosis	906	102	1,300	175	906	102	1,300	175	2,206	277	12 ·556
	Wounds and Injurics	157	18	227	19	157	18	227	19	384	37	9 ·635
	Other Discases	550	33	534	46	550	33	534	46	1,084	79	7 ·287
	Total	5,392	1,226	7,054	2 118	5,392	1,226	7,054	2,118	12,446	3,344	26 ·868

REMARKS.

Fever. The admissions from fever have not been very numerous but the mortality has been great, and in the remittent form it is fully 30 per cent; nearly one half of the total admissions under this head occurred in 1833, the year of famine, as above remarked.

The treatment has consisted in the exhibition of smart purgatives on admission, followed by the use of the saline antimonial solution, and an occasional scruple dose of calomel at bed time—leeches and blisters being applied when thought necessary. V. S. has been seldom admissible from the weak state of the patients. Quinine does not appear to have been employed; but during convalescence tonics have been used.

Cholera. *Cholera,* as might be expected " a priori", has been attended here with fully its usual mortality. The treatment has been *steadily,* calomel in scruple doses, with compound powder of jalap given alternately; and stimulants, turpentine enemata, and sinapisms as adjuncts.

Diarrhœa. The cases of Diarrhœa have been generally the effect of extreme want or this complaint has supervened in the latter stages of other diseases; no fewer than 187 cases, with 39 deaths occurred in 1833. In the treatment of these cases the mildest food was requisite, with gentle tonics, and cordials. The paucity of diseases of the liver, and chest will be observed, whilst on the contrary diseases of the brain have been frequent.

Eruptive Fevers. *Eruptive Fevers.* The table exhibits in a peculiarly striking manner the value of vaccination; fully one half of the cases of variola, in persons unprotected by its antidotal power, having died; whilst in the cases (one hundred and thirty-eight in number) who had been vaccinated no death occurred, and it is worthy of observation that the greater number of cases in both classes of patients (the protected

and unprotected) happened in the same year 1833, and were consequently in other respects, placed in similar circumstances. All the cases of modified small pox exhibited distinct marks of previous vaccination, in one or both arms; and many of the patients had been vaccinated at the Monegar choultry, adjoining to the hospital, to which they had resorted for food. Small pox might probably have spread to a considerable extent amongst the poor who came to the Presidency to seek for food, had it not been for the exertions of the Superintendant of vaccination who on the disease appearing amongst the paupers, adopted the precaution of vaccinating all those applying for relief, who did not exhibit marks of small pox, or of previous vaccination; and out of the vast numbers who were fed at the choultry that year, nearly 8,000 received by the adoption of this system, *successfully*, the protection of vaccination.

Atrophia.

Atrophia. The number of cases and mortality under this head are calculated to excite surprize; but of the number exhibited in the table 3,917:—2,952 occurred in 1833, with 1,236 deaths, and were all the consequence of want; many died on admission, others lived but a few hours, while the most of those who were rescued from a cruel fate, were saved with difficulty. In almost every case the bowels were relaxed on admission, or became so after taking food.

The treatment consisted in giving mild nutritious diet; rice congee of a thick consistence, with a little ginger powder and salt, was that generally preferred by the patients; cordials with aromatic spirits of ammonia and laudanum or astringents with chalk mixture, and laudanum; the doses regulated according to the effect produced; in every instance where wine was given, it proved injurious.

Phlogosis & Ulcers.

Phlogosis. Under this head 1,513 cases of ulcers are included, with 215 deaths; the vast mortality attending this disease requires a few explanatory remarks. The worst cases have always been noticed to occur in

weakly ill fed persons; no fewer than 502 admissions wtih 83 deaths, occurred in the year 1833; and 188, with 25 deaths, in the year following.

The character of the sore has been that described by some writers as gangrenous ulcer, by others phagedenic and by others hospital gangrene; many of the cases closely resembled this last form of disease, with the exception of not being contagious; it is a disease solely depending on debility from want of proper food; as would appear from its usually occuring in the feet and legs; and its being met with almost exclusively in hindoos, whereas it is seldom seen in the stouter, and better fed mahomedan. No local treatment is of benefit in these cases until the constitution is invigorated and improved by diet, and attention to the digestive functions; and it has been invariably found that as the general health improves, the sores also begin to amend; ulcers of this character are seldom absent from the infirmary, but no case has ever occurred to countenance even the slightest suspicion of its being contagious, for although there are always many chronic ulcers and other sores in the institution, they have in no instance been observed to take on the phagedenic form.

Necessity for Public Dispensaries.

Seeing then that there is so great a prejudice, and also an unwillingness on the part of the natives in general, to apply to an hospital for aid, for here as elsewhere, even poverty itself submits with reluctance to leave its *own* abode, the usefulness and even the necessity of public dispensaries will be obvious. The people have less objection to apply to them for aid, and when well regulated they are calculated to do much good, both in relieving sickness, and in preventing disease.

The Chintadrapettah Dispensary has been highly useful in both these respects, since it was established in 1828, as the following table will show.

Classes.	No. of Admission.	Principal diseases.		Deaths.
Fevers	3,968			11
Cholera Biliosa	117			46
Do. Spasmodica	123			63
Diseases of the abdominal viscera	6,248	1137	Diarrhœa	7
		446	Colica	0
		1015	Dyspepsia	1
		3017	Obstipatio	0
		547	Dysenteria Ac. et chronica	2
Liver	61			0
Diseases of the Lungs and Heart	1,309	1092	Catarrhus	0
		143	Asthma	0
		22	Phthisis pulmon.	1
		30	Hœmoptysis	0
Do. Brain	293			1
Do. Eye	127			0
Do. Skin	1,751			0
Eruptive Fevers	35			1
Dropsies	212			3
Rheumatic affections	2,562			1
Venereal affections	1,116	134	Syphilis primitiva.	
		42	„ consecutiva.	
		805	Gonorrhœa.	
Specific diseases	1,336	840	Scrophula.	
		104	Elephantiasis.	
		203	Guinea worm.	4
Wounds and Injuries	1,277			0
Phlogosis	7,633	1382	Otalgia.	0
		1356	Apostema.	0
		3115	Ulcus.	2
Other diseases	1,526	„	„	4
Total	29,694			147

The native population highly appreciate this institution, and also the one attached to the infirmary, which was opened in 1837.

As already remarked these dispensaries are calculated to do much good, but this can only be effected under the strictest superintendence, as otherwise they would lead to abuse

and a needless waste of medicines; in both the institutions adverted to a considerable proportion of the medicine prescribed, is given to the patients in the presence of the medical subordinates, and every care is taken to ensure the strictest regularity and attention. A register is kept shewing the name, date of admission, disease, days of attendance, and the result in each case, and but very few patients are found to absent themselves until regularly discharged.

GENERAL HOSPITAL.

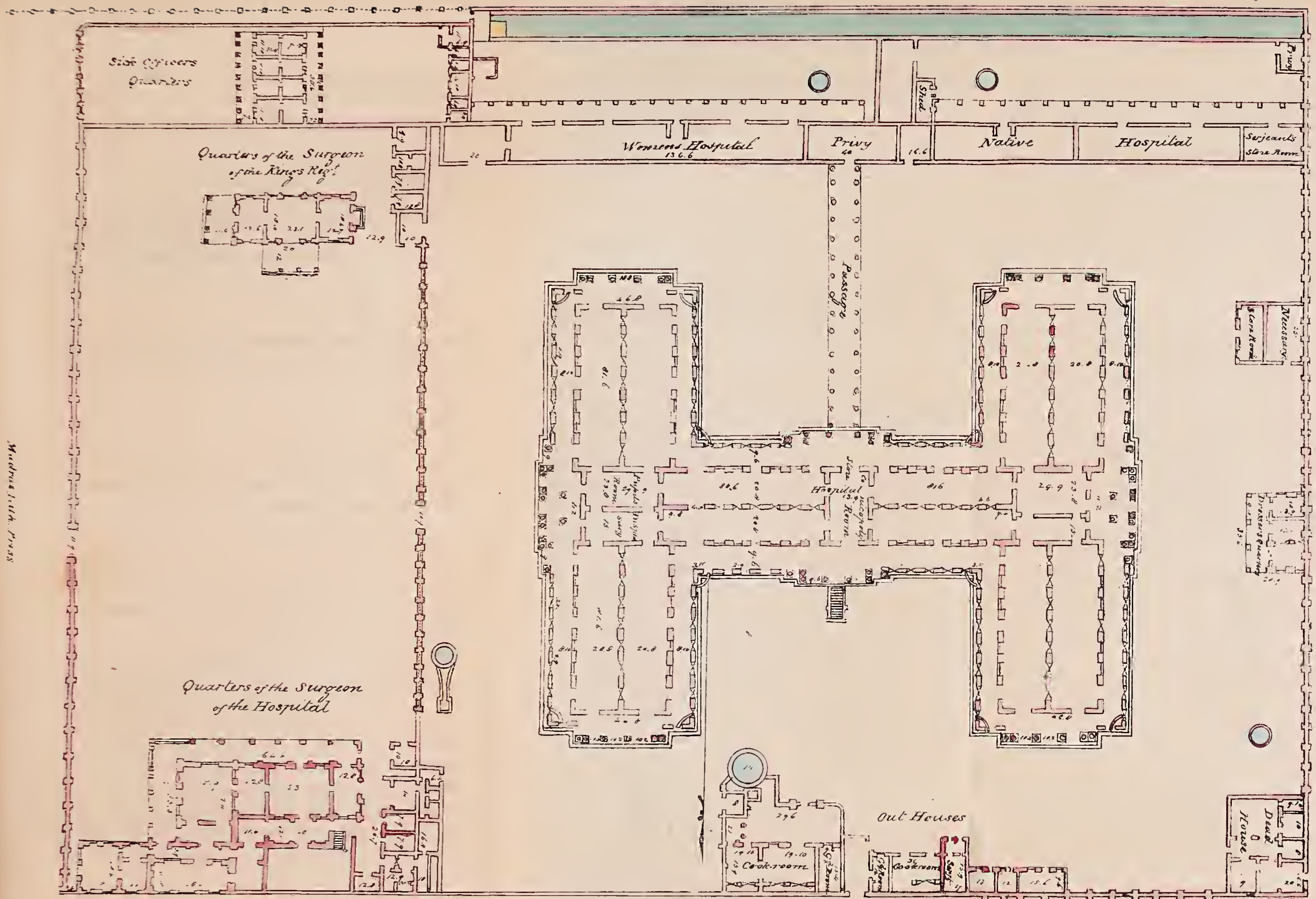
Situation & General description.

The General Hospital, as its name implies, is an institution for the reception of both European and native sick, whether belonging to the public service or not. It is situated on the esplanade of the Fort, at the south western extremity of Black-town, near an angle of the town or rampart wall, which encloses, and bounds the building on its southern aspect; it is distant from the Fort, due west, 520 yards, being the average width of the esplanade on the southern and west sides. The soil on which the hospital is situated is sandy and dry; and the site though low, is not lower than that of the surrounding plain.

The space occupied by the hospital and offices attached, measures in length 185 yards, and 145 in breadth; being bounded on the south side by the rampart or town wall, on the east and west by a wall of 10 feet in height, and on the north partly by the wall, and some offices.

The hospital is a puckah building of one story, having a terraced roof, with brick floors raised about a foot from the ground. It consists of three ranges of buildings two of which run parallel and are connected by the third in the form of the letter **H**, the principal entrance being in the range which faces east; each of these buildings contains a double range of commodious wards, four in number, surrounded by a verandah nine feet wide, the wards being each 80 feet in length by 21 in breadth, and 15½ feet high. In the centre of the

PLAN
of the
GENERAL HOSPITAL
at the Residency.



Madras Lith. Press

parallel ranges which form the wings, are two apartments for the surgery and dispensary, and for the medical subordinates; and in the centre of the connecting building are rooms for the Commissariat hospital stores.

The wards are ventilated by doors and windows, there being three spacious doors, and three windows provided with venetian blinds, in each; the partition wall having likewise an equal number of arched door-ways. Each ward of which there are twelve in number, can accommodate sixteen patients, and the building is therefore calculated for 192 patients; but it can receive on emergency a much larger number.

The building now described is solely for the reception of European sick, one half of which is appropriated as an hospital for the sick of Her Majesty's regiment occupying Fort Saint George.

Detached from the hospital but in the same enclosure, and extending its whole length from east to west, is a range of buildings, pent roofed and tiled; one-half of which, capable of containing fifty patients, is set apart for European women and children, the other for native sick, of both sexes, who have separate apartments.

The dispensaries, store room, cookroom, and other out-houses are conveniently arranged, and well adapted for their purposes and there is an ample supply of water on the premises.

In the same enclosure are quarters for the surgeon of the General hospital and his assistants, as also for the senior medical officer of Her Majesty's regiment.

The aspect of the hospital between north and north east, is obstructed by the houses of Black-town, which are separated from it by a public road, leading to one of the gates, and forming one of the principal thoroughfares of Black-town; the buildings in the vicinity of the hospital are dense, intersected by narrow and filthy lanes; and inhabited by persons of the

lowest class. There are several native places of worship close by, and the noise, especially during any of the festivals, is a source of much annoyance to the sick.

The wall or rampart which surrounds Black-town forms an angle, as already stated, in which the general hospital and offices are situated, the rampart terminating on the southern side in a line with the front wall of the hospital compound; beyond the rampart and around the town there is a clear space varying in breadth from a quarter of a mile to one mile; the canal formerly alluded to as running parallel to the rampart, passes the hospital at the distance of 130 yards, and its banks for a considerable space, are resorted to as a *place d'aisance* by the natives.

There is also a ditch or drain between the canal and rampart, which, after running parallel to the latter, turns to the south-west angle of it, at a distance of one hundred yards from the hospital compound, and after passing the whole length of the southern side of the hospital, it then meets a similar drain leading from Black-town, and also a branch of the Cooum river, immediately below the glacis of the western angle of the fort.

The south-eastern aspect of the hospital, is clear from the compound to the sea; a branch of the Cooum river running parallel to, and about two hundred yards distant from its southern face; at the western angle of the fort, and nearly due east from the hospital, this branch turns towards the southward, where it unites again with the other branch, into which the main river had bifurcated about a mile higher up, encircling by their reunion a spacious piece of ground called the "Island."

Thus, the hospital is freely open to the southerly, and somewhat less so, to the easterly winds, or sea breeze, both however blow across these drains, and the easterly wind passes over the fort ditch also, before it reaches the hospital. When these drains are cleared out, the soil is spread on the banks

and allowed to dry there ; the time chosen for this purpose is usually the end of the hot season, and it has been remarked, that convalescence then proceeds more slowly amongst the sick than at other seasons of the year, and that ulcers are apt to put on an unhealthy appearance, rendering frequent fumigation of the hospital necessary.

The hospital though centrical is, from the causes above stated, far from being in an eligible situation, though no epidemic disease has prevailed in it for the last 10 years that could be attributed to its locality. The compound is small, and confined, being surrounded with a wall of 10 feet in height, which materially interrupts free ventilation.

The construction of the building may be looked upon as a model, perfect in every respect for an hospital in this country, were the floor raised 5 feet higher from the ground.

Rules for the admissions of patients.

It has been already mentioned, that this hospital is open for the reception of European and native sick of the Military, Seamen of H. M'.s. Navy, and of private ships; and European sick, not belonging to the service, whether male or female who may be destitute, are also admitted, clothed and victualled at the expence of Government. Native sick not belonging to the public service, are likewise admitted in cases of accidents and other emergencies.

The following is the scale of authorized deductions and charges recovered from patients treated in the General hospital.

	R.	A.	P.	
Commissioned officers and superior grades of Warrant officers.........	1	0	0	per day.
Conductors, Overseers, Troop Quarter Masters, Riding Masters, Sub Conductors, Sub Overseers, Apothecaries, second Apothecaries, and Assistant Apothecaries............	0	8	0	do.
Wives of Warrant Officers..........	0	5	0	do.
(The stoppage to be made from their Husband's abstracts.)				

	R.	A.	P.	
Non-Commissioned Officers, Corporals, Drummers, Privates, Carnatic Ordnance Artificers, &c.	0	3	0	do.
European Women, (wives of Soldiers.)	0	1	0	do.
Seamen of the Royal Navy, and of Merchant vessels..	0	5	0	do.
Chelsea Pensioners, and Pensioners of the H. C. Service..............	0	3	0	do.

Persons having the means of supporting themselves, or having relatives or friends able to support them, may be received into the general hospital at the discretion of the surgeon in charge, subject to the approval of the Superintending Surgeon, provided that they furnish, if in the public service, a requisition for admission from the head of the Office to which they belong; otherwise a written engagement from some respectable individual at Madras, to pay monthly, the regulated charge for the period they may be in hospital.

Recoveries are to be made from persons of the foregoing description, at 8 annas per diem.

No stoppages are made from Sepoys,—Lascars,—Native Artificers,—or the poor.

The General hospital is the principal institution to which assistant surgeons, on their first admission on the establishment, are attached during their probationary course, for initiation into the treatment of tropical diseases. It affords an excellent field of observation, and under the tuition and guidance of experienced superintendents, the probationers are generally qualified for the general duties of the service in about six months.

The tables annexed show the number of admissions into the General hospital, and deaths from particular diseases, as well as from each class of disease, during each half year for a period of 10 years, with the per-centage of deaths, to the number treated. The average annual number of admissions, for this period, amounts to nearly one thousand.

PRESIDENCY GENERAL HOSPITAL.

No. 2.—*Table exhibiting the number of Admissions and Deaths from each class of Disease for 10 years.*

EUROPEAN TROOPS.

CLASSES.	DISEASES.	Years 1829 to 1838, inclusive. 1st Half. Adm.	1st Half. Died.	2d Half. Adm.	2d Half. Died.	Admissions and Deaths from each Class of Disease. 1st Half. Adm.	1st Half. Died.	2d Half. Adm.	2d Half. Died.	Total admissions from each Class.	Total deaths from each Class.	Average per-centage of Deaths to Sick.
Fevers	Febris ephemera	82	0	150	0							
	,, intermitt. quotid.	47	4	37	2							
	,, ,, tertian	4	0	4	0	177	5	237	9	414	14	3 ·381
	,, remittens	12	0	7	0							
	,, continua	32	1	39	7							
	Cholera	12	10	29	23	12	10	29	23	41	33	80 ·487
Diseases of the Abdominal viscera	Diarrhœa	95	4	175	6							
	Dysenteria acuta et chronica	70	3	100	6							
	Colica	10	0	27	0							
	Obstipatio	179	5	157	0							
	Hœmorrhois	16	0	15	0	386	13	502	12	888	25	2 ·815
	Enteritis	3	0	0	0							
	Peritonitis	4	1	7	0							
	Gastritis	1	0	2	0							
	Dyspepsia	8	0	19	0							
	Hepatitis acuta et chronica	100	8	116	8	100	8	116	8	216	16	7 ·407
Diseases of the Lungs and Heart	Catarrhus	34	3	58	3							
	Asthma	7	2	10	1							
	Phthisis pulmonalis	11	6	9	2							
	Hœmoptysis	3	0	5	0							
	Pleuritis	5	0	8	0							
	Pneumonia	7	1	21	4	75	12	115	11	190	23	12 ·105
	Palpitatio	5	0	2	0							
	Dyspnœa	3	0	2	1							
Diseases of the Brain	Apoplexia	1	1	1	0							
	Epilepsia	8	0	19	0							
	Paralysis	8	1	9	0							
	Cephalalgia	32	3	36	2	228	19	226	7	454	26	6 ·726
	Amentia	4	1	4	0							
	Mania	18	3	18	1							
	Delirium Tremens et Ebrietas	157	10	139	4							
Do of the Eye	Morbi Oculorum	36	0	28	0	36	0	28	0	64	0	0 ·0
,, Skin	,, Cutis	45	1	26	0	45	1	26	0	71	1	1 ·408
Eruptive Fevers	Variola	7	3	3	0							
	Varicella	11	0	1	0							
	Rubeola	5	0	0	0	25	3	5	0	30	3	10 ·0
	Erysipelas	2	0	1	0							
Dropsies	Anasarca	15	3	8	3							
	Ascites	4	1	0	0	19	4	8	3	27	7	25 ·925
Rheumatic affections	Rheumatismus acutus / chronicus	115	4	103	3	115	4	103	3	218	7	3 ·211
Venereal affections	Syphilis primitiva	45	2	70	1							
	,, consecutiva	11	0	16	1							
	Gonorrhœa	104	0	62	0	189	2	176	3	365	5	1 ·369
	Hernia Humoralis	24	0	23	0							
	Strictura (urethræ)	5	0	5	1							
Specific Diseases	Atrophia	9	2	5	3							
	Lepra	1	0	0	0							
	Dracunculus	0	0	0	0	17	2	12	3	29	5	17 ·241
	Scrophula	6	0	2	0							
	Scorbutus	1	0	5	0							
	Phlogosis	170	1	186	2	170	1	186	2	356	3	0 ·842
	Wounds and Injuries	110	1	124	2	110	1	124	2	234	3	1 ·282
	Other Diseases	113	4	123	6	113	4	123	6	236	10	4 ·237
	Total	1,817	89	2,016	92	1,817	89	2,016	92	3,833	181	4 ·722

PRESIDENCY GENERAL HOSPITAL.

No. 2.—Table exhibiting the number of Admissions and Deaths from each class of Disease for 10 years.

NATIVE TROOPS.

CLASSES.	DISEASES.	Years 1829 to 1838, inclusive. 1st Half. Adm.	1st Half. Died.	2d Half. Adm.	2d Half. Died.	Admissions and Deaths from each Class of Disease. 1st Half. Adm.	1st Half. Died.	2d Half. Adm.	2d Half. Died.	Total admissions from each Class.	Total Deaths from each Class.	Average per-centage of Deaths to Sick.
Fevers	Febris ephemera	144	0	241	3	279	7	366	8	645	15	2 ·325
	„ intermitt. quotid	89	1	79	3							
	„ „ tertian	7	1	3	0							
	„ remittens	11	1	16	1							
	„ continua	28	4	27	1							
	Cholera	2	2	23	19	2	2	23	19	25	21	84 ·0
Diseases of the Abdominal viscera	Diarrhœa	74	5	102	12	168	8	196	17	364	25	6 ·868
	Dysenteria acuta et chronica	16	1	19	3							
	Colica	6	0	10	0							
	Obstipatio	56	0	50	2							
	Hœmorrhois	3	0	6	0							
	Enteritis	1	1	1	0							
	Peritonitis	1	0	0	0							
	Gastritis	0	0	1	0							
	Dyspepsia	11	1	7	0							
	Hepatitis acuta et chronica	3	1	2	1	3	1	2	1	5	2	40 ·0
Diseases of the Lungs and Heart	Catarrhus	32	2	12	3	52	4	23	7	75	11	14 ·666
	Asthma	7	0	0	0							
	Phthisis pulmonalis	9	0	4	2							
	Hæmoptysis	0	0	1	0							
	Pleuritis	1	1	0	0							
	Pneumonia	3	1	5	2							
	Palpitatio	0	0	1	0							
Diseases of the Brain	Epilepsia	2	0	5	0	63	5	45	4	108	9	8 ·333
	Paralysis	18	2	7	1							
	Cephalalgia	8	0	9	0							
	Amentia	4	0	3	2							
	Mania	29	2	21	1							
	Hydrophobia	1	1	0	0							
	Delirium Tremens et Ebrietas	1	0	0	0							
Do. of the Eye	Morbi Oculorum	37	0	33	0	37	0	33	0	70	0	0 ·0
„ Skin	„ Cutis	66	0	32	0	66	0	32	0	98	0	0 ·0
Eruptive Fevers	Variola	0	0	1	0	3	0	4	0	7	0	0 ·0
	Varicella	1	0	3	0							
	Erysipelas	2	0	0	0							
Dropsies	Anasarca	34	9	12	4	39	11	14	6	53	17	32 ·075
	Ascites	4	1	1	1							
	Hydrothorax	1	1	1	1							
Rheumatic affections	Rheumatismus acutus chronicus	347	6	217	6	347	6	217	6	564	12	2 ·127
Venereal affections	Syphilis primitiva	60	0	56	0	108	0	106	0	214	0	0 ·0
	„ consecutiva	10	0	9	0							
	Gonorrhœa	26	0	23	0							
	Hernia Humoralis	12	0	16	0							
	Strictura (urethræ)	0	0	2	0							
Specific Diseases	Atrophia	61	3	39	7	114	3	50	7	164	10	6 ·097
	Beriberi	3	0	0	0							
	Lepra	5	0	0	0							
	Dracunculus	40	0	5	0							
	Scrophula	5	0	6	0							
	Scorbutus	0	0	0	0							
	Phlogosis	269	3	221	4	269	3	221	4	490	7	1 ·428
	Wounds and Injuries	155	4	156	4	155	4	156	4	311	8	2 ·572
	Other Diseases	93	4	80	6	93	4	80	6	173	10	5 ·780
	Total	1,798	58	1,568	89	1,798	58	1,568	89	3,366	147	4 ·367

GENERAL HOSPITAL.

No. 2.—*Table exhibiting the Number of Admissions and Deaths from each Class of Disease for 10 years.*

CIVIL EUROPEANS.

CLASSES.	DISEASES.	From 1829 to 1838, inclusive. 1st Half. Adm.	Died.	2d Half. Adm.	Died.	Admissions and Deaths from each class of Diseases. 1st Half. Adm.	Died.	2d Half. Adm.	Died.	Total admissions from each Class.	Total deaths from each Class.	Average percentage of Deaths to Sick.
Fevers	Febris ephemera	60	0	56	3	87	4	112	13	199	17	8·542
	" intermitt. quot.	10	0	25	1							
	" " tertian	2	0	3	0							
	" remittens	3	2	10	4							
	" continua	12	2	18	5							
	Cholera	8	4	10	7	8	4	10	7	18	11	61·111
Diseases of the Abdominal viscera	Diarrhœa	57	6	97	4	180	17	237	20	417	37	8·872
	Dysenteria acuta et chronica	23	8	49	13							
	Colica	6	1	6	0							
	Obstipatio	74	0	64	2							
	Hœmorrhois	7	0	3	0							
	Enteritis	2	1	1	0							
	Peritonitis	5	1	2	1							
	Dyspepsia	6	0	15	0							
	Hepatitis Acuta et chronica	12	3	24	1	12	3	24	1	36	4	11·111
Diseases of the Lungs and Heart	Catarrhus	17	1	39	2	41	5	63	8	104	13	12·500
	Asthma	6	0	4	0							
	Phthisis pulmonalis	9	4	14	5							
	Hœmoptysis	4	0	3	0							
	Pleuritis	1	0	0	0							
	Pneumonia	3	0	0	0							
	Palpitatio	1	0	2	0							
	Dyspnœa	0	0	1	1							
Diseases of the Brain	Epilepsia	2	0	2	0	69	4	59	3	128	7	5·468
	Paralysis	7	1	7	3							
	Cephalalgia	12	0	6	0							
	Amentia	5	0	6	0							
	Mania	11	1	14	0							
	Delirium Tremens et Ebrietas	32	2	24	0							
Do. of the Eye	Morbi Oculorum	92	0	114	0	92	0	114	0	206	0	0·0
Do. of the Skin	" Cutis	21	0	21	0	21	0	21	0	42	0	0·0
Eruptive fevers	Variola	2	1	0	0	32	1	9	0	41	1	2·439
	Varicella	9	0	7	0							
	Rubeola	16	0	0	0							
	Erysipelas	5	0	2	0							
Dropsies	Anasarca	9	1	7	2	11	3	10	5	21	8	38·095
	Ascites	2	2	2	2							
	Hydrothorax	0	0	1	1							
Rheumatic affections	Rheumatism. acut. et chronicus	54	2	41	1	54	2	41	1	95	3	3·157
Venereal affections	Syphilis primitiva	23	0	30	1	75	2	70	2	145	4	2·758
	" consecutiva	12	1	9	0							
	Gonorrhœa	26	0	23	1							
	Hernia Humoralis	9	0	5	0							
	Strictura (urethræ)	5	1	3	0							
Specific diseases	Atrophia	13	2	5	2	17	2	18	3	35	5	14·285
	Elephantiasis	1	0	2	0							
	Lepra	3	0	2	0							
	Dracunculus	0	0	1	0							
	Scrophula	0	0	4	1							
	Scorbutus	0	0	4	0							
	Phlogosis	71	1	66	3	71	1	66	3	137	4	2·919
	Wounds and Injuries	55	2	47	1	55	2	47	1	102	3	2·941
	Other diseases	103	4	74	5	103	4	74	5	177	9	5·084
	Total	928	54	975	72	928	54	975	72	1,903	126	6·621

GENERAL HOSPITAL.

No. 2.—*Table exhibiting the Number of Admissions and Deaths from each Class of Disease for 10 years.*

CIVIL NATIVES.

CLASSES.	DISEASES	From 1829 to 1838, inclusive. 1st Half. Adm.	Died.	2d Half. Adm.	Died.	Admissions and Deaths from each Class of diseases. 1st Half. Adm.	Died.	2d Half. Adm.	Died.	Total admissions from each Class.	Total deaths from each Class.	Average percentage of Deaths to Sick.
Fevers	Febris ephemera	8	0	10	0	16	0	15	2	31	2	6 ·451
	,, intermitt. quot	3	0	3	0							
	,, ,, tertian	1	0	0	0							
	,, remittens	0	0	0	0							
	,, continua	4	0	2	2							
	Cholera	13	7	15	13	13	7	15	13	28	20	71 ·438
Diseases of the Abdominal viscera	Diarrhœa	3	0	8	0	14	1	26	0	40	1	2 ·500
	Dysenteria acuta. et chronica	2	0	5	0							
	Colica	1	0	2	0							
	Obstipatio	5	1	10	0							
	Hæmorrhois	2	0	0	0							
	Dyspepsia	1	0	1	0							
	Hepat. acut. et chronica	2	0	0	0	2	0	0	0	2	0	0 ·0
Diseases of the Lungs	Catarrhus	1	1	3	1	2	2	3	1	5	3	60 ·0
	Phthisis pulmonalis	1	1	0	0							
Diseases of the Brain	Cephalalgia	1	1	2	0	21	3	12	3	36	6	16 ·666
	Paralysis	2	0	1	1							
	Epilepsia	0	0	1	1							
	Amentia	8	1	2	0							
	Mania	8	1	3	0							
	Delirium Tremens et Ebrietas	5	0	3	1							
Do. of the Eye	Morbi Oculorum.	1	0	1	0	1	0	1	0	2	0	0 ·0
Do. of the Skin	,, Cutis	4	0	3	0	4	0	3	0	7	0	0 ·0
Eruptive Fevers	Variola	2	0	0	0	4	0	1	0	5	0	0 ·0
	Varicella	2	0	1	0							
Dropsy	Anasarca	2	0	3	1	2	0	3	1	5	1	20 ·0
Rheumatic affections	Rheumatism. acutus et chronicus	16	0	9	0	16	0	9	0	25	0	0 ·0
Venereal affections	Syphilis Primitiva	4	0	8	0	14	0	13	0	27	0	0 ·0
	Gonorrhœa	3	0	4	0							
	Hernia Humoralis	2	0	1	0							
	Strictura (urethræ)	5	0	0	0							
Specific diseases	Atrophia	2	1	0	0	2	1	1	0	3	1	3 ·333
	Scorbutus	0	0	1	0							
	Phlogosis	22	1	28	2	22	1	28	2	50	3	6 ·0
	Wounds and Injuries	168	11	195	16	168	11	195	16	363	27	7 ·438
	Other diseases	22	6	26	5	22	6	26	5	48	11	22 ·916
	Total	326	32	351	43	326	32	351	43	677	75	11 ·078

A few observations on the more important classes of disease are here given.

Fever. *Fever*, the table shows the number and prevalence of each form of fever, the general character of which has been mild and tractable, and the following remarks bear chiefly on the use of Quinine and purgatives, in the treatment of the intermittent and remittent types of that disease, by the surgeon of the institution during the period referred to.

A purgative is usually given on admission followed when there is no irritability of the stomach, by the use of the saline antimonial† mixture; at bed time a *full dose* of calomel (grs. x) is given, and on the least tendency to a remission, whether manifested by diminished frequency of pulse, decrease of temperature, or even a feeling of general improvement on the part of the patient, or any other change however slight, if considered indicative of this condition, quinine is exhibited. The term remission is here used in its relative sense, and however variable in the hour of its occurrence, or indistinct in its manifestation, is the period at which the use of this remedy is commenced. It is given in doses of grs. v. every hour, to the sixth time. The extent to which this medicine is prescribed, has been rendered necessary by the failure of smaller quantities in producing the required effect, and it has consequently been given for some time, in doses considerably larger than appeared necessary on its first introduction into practice, in this country.

In general it is given in the form of pills, diarrhœa having in several instances been found to follow its use when administered in solution, and which has not again recurred when the pills were resumed. In several cases it has produced headache, which was relieved by the patient taking a little arrow-root.

The period of remission is a guide not only for the use of

† Containing one eighth of a grain of tartrate of antimony, in each ounce.

the quinine, but also for the beneficial exhibition of other remedies, particularly purgatives, for although there cannot be a doubt of their importance in the treatment of this disease, yet it is believed, that the recurrence of paroxysms of fever have been, among other bad effects, distinctly referrible to the irritation produced by the exhibition of them, at ineligible periods.

The invariably deranged state of the secreting and excreting functions in fever, is considered to indicate the use of purgative medicines, and the removal of the accumulations necessarily collecting in the bowels, should be effected, more especially after the first stage of the disease, in the manner least likely to produce irritation or exhaustion; the most eligible period for the exhibition of a purgative is believed to be the commencement of a remission, or intermission, at whatever hour this may take place; and much disappointment has been experienced, in finding the paroxysm of an intermittent, anticipate its usual period of recurrence, or a remittent become almost continued, or more severe in its exacerbation, from the administration of a dose of purgative medicine, without attention to the considerations now laid down, and in such cases it has usually been observed, that the effect of the medicine was suspended, until in an intermittent, the paroxysm had reached its last stage; or been succeeded by approaching apyrexia, or in a remittent fever, until it approached the next usual period of abatement, the paroxysm being at the same time prolonged and the symptoms aggravated.

In one case of a long continued and low remittent fever, attended with a jaundiced state of the skin, and œdema with much debility and which had subsided under the use of quinine, a relapse followed an attempt made to increase the activity of the bowels, and restore the secretions to a more healthy state. The use of quinine again produced its beneficial effects, and a repetition of an active purgative, without reference to the time of exhibition, was a second time followed with a relapse;

the same result, on several occasions, was observed in the same case, before convalescence was confirmed.

The effects now mentioned may be considered more prejudicial, than any likely to result from permitting the bowels to retain their contents, for a limited period, or until the quinine has had time to exert its specific beneficial influence on the system. The debilitating effects of loose watery motions, at a late stage of the disease when the time for depletion has passed, and when exhaustion of the vital energy may be apprehended, are too obvious to require remark.

The administration of calomel in the treatment of these fevers, more immediately in reference to its action on the biliary system, is indicated by the appearance of those symptoms usually termed bilious, manifested by the dusky yellow tinge of the eyes, skin, &c.; when however it is considered that its operation as a purgative, will be likely to produce a degree of irritation, incompatible with the efficacy of the quinine, it is combined with opium, a remedy which although contra-indicated at an earlier stage, when evacuations are required, yet when restlessness is more the effect of nervous debility, than of febrile irritation, its use is attended with beneficial results.

The attempt to restore the diseased visceral secretions to a healthy condition, during the existence of fever, is it will be seen considered of doubtful propriety, and the occurrence of the desired improvement, when it does manifest itself under such treatment, is too readily considered as its effect.

The same remark also applies to blisters, and to those medicines given for the purpose of restoring the secretion of the skin; the utility of the latter (diaphoretics) has however been evident in cases, where their free effects could be produced during a remission, and maintained for a sufficient length of time to be extended to the succeeding paroxysmal period.

It appears therefore, that during the employment of quinine, the stomach, (the natural functions of which are so palpably deranged in fever) ought to be left undisturbed as much as possible; and it is worthy of remark, with regard to this remedy (quinine) that no bad consequences, nor any aggravation of the symptoms, have been observed, even after it has been continued throughout the greater part of an exacerbation. The treatment after the fever has been subdued, consisted in the exhibition of alterative and laxative medicines, continued while they appeared to be required for the restoration of healthy secretions.

Cholera. *Cholera*, but few cases of this disease have been received into the general hospital, previous to the appearance of the stage of collapse, and a great proportion of them have been in a moribund state on admission; this arises from the generality of the patients not being under control, and therefore not compelled as in military hospitals to apply for aid, at that early period of the disease, when it is most likely to be efficacious; and will fully explain the unusually high ratio of mortality observed in the tables.

The treatment pursued in cases which were in a state to derive benefit from medicine, has been generally calomel in ten, or twenty grain doses, with fifty minims of the tincture of opium; stimulants, as carbonate of ammonia and sulphuric ether, &c., sinapisms and blisters to the epigastrium, and external warmth by heated sand in bags. At one time, the nitric and muriatic acids were exhibited, croton oil and jalap, but not proving successful, this treatment was abandoned.

Dysentery. The principal remedies employed in the treatment of dysentery, have been bloodletting general and topical, ipecacuanha, mercury, castor oil and fomentations.

The propriety of venesection necessarily depends on the strength of the patient, and urgency of the symptoms; the

quantity of blood drawn is regulated by the effects produced by it on the circulation; it has been generally carried to syncope, or until the pulse becomes feeble, a second bleeding has seldom been required, and V. S. is considered admissible only in the very early stage of the acute form of the disease.

Topical depletion is afterwards employed, when the repetition of V. S., may be considered ineligible.

The symptoms requiring the application of leeches, after general bleeding, are local pain, a sensation of heat, or uneasiness of the abdomen upon pressure, and the appearance of any considerable quantity of slime and blood, in the evacuations indicating the existence of inflammation at a stage of the complaint, when it may be of the utmost importance to save as much as possible the strength of the patient; in mild cases, local bleedings alone have been sufficient; and where a patient has been debilitated by former disease, dissipation, or a lengthened residence in the country, the abstraction of blood is unnecessary.

Nauseating doses of ipecacuanha are usually commenced immediately after bleeding, and the operation of a dose of castor oil; and its employment is continued, to the extent of five grains, in combination with an equal quantity of powder of gum arabic, every hour, or second hour, as the patient's stomach may be able to bear it, without inducing vomiting; it is given in the form of pills, and during its use, fluids are sparingly allowed.

The sudorific effect of this medicine is assisted by the application of fomentations to the abdomen, a remedy of the greatest importance, and which appears to be particularly grateful to the patient's feelings, relieving griping and tenesmus.

It is important to remark, that with the relief from griping

and straining, a corresponding improvement in the appearance of the biliary discharge, has generally followed the administration of ipecacuan, and become apparent after a sufficient quantity had been taken to produce nausea.

The *laxative* preferred during the treatment, is castor oil, it has been found to operate with equal efficacy, and less irritation than any other medicine of this class; it is given on admission, and repeated afterwards when indicated by tormina, scanty stools, and *much* straining.

When the evacuations are partly feculent, of a dark or brown green colour, or of several shades of yellow, mixed with dysenteric discharge; or when they exhibit any of those numerous shades of difference, which are considered as appearances indicating a deficiency, or vitiated quality of the hepatic secretion, mercury is prescribed; a dose of calomel varying from ten to twenty grains is given at bed time, on the evening of admission; and its repetition on the following night, which is the period preferred for exhibiting it, is regulated by the appearance of the hepatic secretion, indicated by the evacuations. When the stools become tinged of a bright yellow colour, notwithstanding the presence of slime or blood, blue pill is substituted in such quantities, and at such intervals, as to induce a continuance of the secretion of the colour alluded to, and is seldom entirely omitted before convalescence.

The use of mercury is entirely regulated by the indications now mentioned, and the quantities exhibited are therefore as various as the states of the biliary secretions.

In cases complicated with hepatic affections, mercury is more freely exhibited, although never carried to the extent of producing ptyalism; and with the exception of one case, in which an unusually small quantity slightly affected the mouth, it has not occurred; the intention having been accomplished in all the other cases, without the salivary glands becoming affected.

Opium except in the form of enema has formed no part of the treatment.

The diet during the treatment of the disease, is strictly of the most unirritating kind, consisting of congee, arrow-root and sago.

Chronic Dysentery. In the chronic form of dysentery, blue pill with ipecacuan, in doses of two or three grains, three times a day, with tonic bitters, and small doses of castor oil, have been the remedies principally used ; strict attention is paid to the regimen, and a flannel band is worn round the body. The result of the treatment in both forms is seen in the foregoing table.

Hepatic Disease. The treatment of hepatic affections has not differed from that usually employed. A great proportion of the cases have been of a chronic nature, occurring in pensioned, or invalided men, or patients arriving from out-stations, sent to the Presidency for change of air, which accounts for the number of these complaints, and also for the comparatively large percentage of mortality.

Phthisis Pulmonalis. *Phthisis Pulmonalis,* this disease has been frequently met with in Indo-britons; it has also been seen occasionally in European subjects about the age of puberty, and within the first two or three years after arriving in India, but is of rare occurrence after that period; and, in natives true tubercular phthisis, has comparatively been seldom met with.

Chronic Rheumatism In a chronic form, *rheumatism* constitutes a numerous class of cases, both among Europeans and natives.

Cases of chronic rheumatism, in Europeans have very generally occurred after syphilis, and have been attended with enlargement of the bones and joints, and should more proper-

ly have been entered under the designation of secondary syphilis, than rheumatism; some patients however have been similarly affected, without its being referrible to a venereal origin, but it must here be remarked, that rheumatism has seldom been seen, attended with enlargement of the bones or periosteum, unless after syphilis, or where mercury had been used to a considerable extent, for the cure of other diseases. Most of these cases have occured in old soldiers, few of whom have passed through their period of service, without having repeatedly been placed under the influence of mercury; and it has also been observed, that in scrophulous constitutions, the incautious exhibition of mercury, is of itself productive of symptoms resembling those considered secondary syphilis.

In these cases, the general health is always more or less affected, and the first step in the treatment, is directed to its improvement. In attempting to effect this object, the secretions are regulated by the use of laxative medicine, with alterative doses of blue pill, in combination with ipecacuan and sarsaparilla, aided by gentle tonics; the diet being carefully attended to.

The use of alteratives in such cases is often unnecessarily protracted, their effects being slowly produced are likely to be unobserved, and it must be obvious, that their continued administration may occasion actual disease. The first symptoms of amendment to be expected from alterative medicines are an improvement in the appearance of the tongue, a return of appetite, and regularity of the bowels; the sleep becoming more refreshing, the skin smooth and free from eruption, and the urine copious and of natural colour. When these effects have been produced, the use of the remedies in question may be gradually and safely discontinued; while on the other hand, perseverance in them after having been used for three or four weeks, without beneficial results, appears to be of doubtful propriety and is considered to indicate the necessity of searching for some local affection, as the cause, of the unfavorable symptoms continuing.

With regard to local applications, blisters and liniments being found useful, are very generally employed; opiates at bed time have also been remedies, from which much immediate relief has been experienced; the vapour bath, has been used with considerable benefit, as likewise the tepid bath.

In rheumatic cases where a periodicity in the return of the disease, or in the increase of severity of the pain, is observable, as is perhaps more frequently the case, when it occurs as a sequela of fever, the sulphate of quinine has been used, with marked advantage.

Atrophia. *Atrophia*, under this head have been included, those cachectic cases which have presented themselves in the last stage of ill defined chronic disease; the state indicated having been the effect of long continued illness, involving the whole of the natural functions, and producing a degree of emaciation and debility, which appears to be the chief feature of this complaint.

MEDICAL SCHOOL.

Medical School. Attached to the General hospital is the Medical school, an Institution established by Sir Frederick Adam in 1835, for the instruction in Medicine and Surgery of East indians, and natives entering the subordinate medical branch of the service; and which was subsequently, in the year 1838, thrown open to private students or persons not in the public service under the *regulations given below.

* The following Regulations, for the admission of Private Students, or persons not in the Public Service, to the benefits of the course of instruction given at the Medical School, having been approved of by the Right Honorable the Governor in Council, are published for general information.

1. Applicants for admission not to be under 15, nor above 20 years of age.

2. To possess a sufficient knowledge of the English language, and of the other branches of ordinary education, to qualify them for the study; an elementary knowledge of Latin being desirable, but not indispensable.

3. Their qualifications to be ascertained by examination by the Medical Board, after which, if found eligible, their admission will be sanctioned.

4. On being enrolled as students, they are to be subject, exactly in the same manner as those of the Public Service, to all the present rules for the internal conduct of the Institution, and to such others as necessity may suggest, for the class of Pupils to which they belong, for the purpose of securing attention, regular attendance, &c.

The building consists of a theatre or lecture room, a library and museum, and a laboratory. The course of education comprises the study of Materia Medica, and Pharmaceutical chemistry, Anatomy and Physiology, Surgery and the practice of Physic.

The pupils of the public service consist of two classes, viz. Europeans or East indians, and natives: the former being in the grade of "Medical apprentice," and the latter of "Native medical pupil," from which they are promoted to "Assistant apothecary," and "Second dresser," respectively after examination, and strictly according to merit. They are then available for transfer to the various hospitals; and the information respecting the nature and treatment of disease both medical and surgical, imparted to them at the institution renders them valuable hospital assistants.

5. Private students to have access in common with the others, to works of reference belonging to the school, but to provide their own stationery, and books required for private study; all other benefits to be gratuitous.

6. Objectionable conduct to be brought to the notice of the Medical Board, and to subject the students to expulsion, or such other penalty, as may be considered necessary, for the preservation of the discipline of the Institution.

N. B.—As students cannot be admitted to a class after a course of instruction has commenced, it is necessary, that all applicants, should be prepared to enter on their duties with the next Public Class formed subsequently to their admission of which due intimation will, from time to time, be published in the *Fort St. George* Gazette.

By order,

(Signed) Geo. Pearse, M. D.
Secretary Medical Board.

Medical Board Office,
25*th August*, 1838.

LUNATIC ASYLUM.

Site and description. The Lunatic Asylum, is situated at Kilpauk, a retired part of the environs of Madras, about two miles and a half west from Fort St. George, placed in the middle of an enclosed square piece of ground about thirteen english acres in extent. The ground presents a level surface of turf, with but little vegetation, beyond a few cocoanut trees, at its eastern angles; the situation is rather low, and the soil *deep*, and clayey.

Rules for admission for Patients. The asylum is the only establishment under the Madras presidency intended exclusively for the reception of lunatics, and is adapted for the accommodation of *such insane persons, whether Europeans or Natives*, as from continued mental derangement, may require restraint, and treatment in an institution of the kind. Harmless idiots however, are received into the native infirmary. All military insane persons European or native under ordinary circumstances, are required to be kept for at least three months, from the commencement of their illness, under the immediate charge of the local medical officers throughout the presidency, before being sent to the asylum; and agreeably to the orders of the Honorable the Court of Directors, all Europeans afflicted with insanity, are sent to England with as little delay as circumstances admit of. Insane European officers, during their detention at the presidency, are accommodated in quarters attached to the general hospital, but soldiers are generally kept in the asylum for some time preparatory to their embarkation. In general therefore there are but few European patients at a time in the asylum; its usual inmates chiefly consisting of Indo-britons, and natives, many of the latter being criminal lunatics, sent from the interior.

The building, which is constructed of brick, and terraced, consists of three quadrangles of one story, on the inner sides of which are arranged the apartments, or cells for the patients, each having its door opening into the square, and opposite to it a barred window facing outwards. The

principal square, which was originally intended chiefly for the accommodation of European male patients, has its front to the east; and the two smaller squares, one for female patients, and the other for native male patients, are placed behind it. The whole building is surrounded generally at a distance of about fifty feet, by a curtain wall, nearly six feet high.

The entrance to the great square is on the eastern face, on one side of which the dispensary, offices, and commissariat hospital stores are placed, and on the other are apartments for the resident subordinate medical attendants, and cook-rooms, none of which open into the square. There are twenty-four cells in the large quadrangle, and in the centre of the area, which is about 140 feet square, is a large bath room, amply supplied with water. In each of the two smaller quadrangles are six single cells, and four double ones, and though somewhat smaller than the European cells, they are equally well ventilated. The cells and verandahs of the whole building are floored with square bricks: and to admit of the more ready purification of the apartments, of such patients as are inattentive to cleanliness, the floor of each cell has a slight inclination to one of the angles, on the outward face, where a small circular opening through the wall, gives ready exit to the water used in washing the floor, and it is carried off by drains round the building, keeping the whole perfectly dry.

Extent of accommodations.

The asylum contains fifty six separate apartments for patients; and this accommodation has been found to be sufficiently extensive although a separate cell is invariably allotted to each individual, the number of patients in the institution having, for many years past, but rarely amounted to fifty at any one time.

Long verandahs, and shaded walks in the square, afford convenient space for moderate exercise; but all patients whose cases admit of it, are induced, in favourable weather, to take exercise in the outer enclosure every morning and evening, on a circular walk in front of the asylum.

Observations on the sick treated.

The site of the institution is apparently healthy, for during the last fifteen years no disease has prevailed among its inmates, which could be fairly attributed to its locality.

From what has already been said with regard to the mode of admission of European military insane patients, the rules of the service requiring them to be at least three months under treatment, before they are transferred to the asylum, (in the majority of cases twice this period has elapsed,) and from their remaining but a short time in the institution, its records afford no satisfactory information as to the result of treatment in cases of mental disease, amongst this class of patients. The same rules are attended to in the admission of natives, in whom the acute stage of the disease has also generally passed away, (especially among those not belonging to the service, and who form a large proportion of the admissions) and in such cases the treatment can therefore be but palliative. The prejudices of the people in general prevent *post mortem* examinations being made, and the pathology of mental diseases can therefore be little advanced by this institution.

EYE INFIRMARY.

Site and description of the Eye Infirmary.

The Eye infirmary is situated at the S. W. extremity of Vepery, in a large enclosure adjoining the Poonamallee road. The edificc which has a southern aspect is built of brick and terraced, and consists of a centre and two wings. The centre portion which is two stories high, is the residence of the superintendent; the wing on either side, of one story, forming the wards for the patients; one wing consists of a ward 133 feet long, and 20 broad, capable of containing 103 patients, and the other is divided, into four separate apartments, viz. one for sepoys, a second for high caste natives, a third for inferior grades, and the fourth for all serious cases, particularly those who have undergone any operation; this wing can accommodate 105 patients, so that the whole house is calculated for 208 patients. It is well ventilated by doors, and venetianed windows; and there is an ample supply of good water on the premises. A commodious surgery and rooms for the medical subordinates are attached, also a room for high caste natives to take there food, &c. with cook-rooms, and other conveniences.

From the preceding remarks it will be observed, that the accommodation in the infirmary, properly so called, is exclusively for natives. European patients are accommodated in a ward in the general hospital.

The Eye infirmary was established in 1819, and is open for the reception of European and native soldiers, as well as for Europeans and natives not belonging to the service. The medical charge is vested in the Company's oculist; the duties bcing conducted under the general supervision of the Supcrintending surgeon, and of the Medical Board. Assistant surgeons recently arrived from Europe are enjoined to pay every possible attention to the practice in this institution; and they are ordered to attend there frequently, and especially on the day set apart for operations.

The following tables show the number of admissions, cures, &c. in each class of patients Civil and Military, during the nine years, from 1830 to 1838 inclusive, and the nature of the most prevalent diseases.

MILITARY.

	Europeans, admitted.	Discharged. Cured. By medical treatmt.	Discharged. Cured. By operation.	Discharged. Relieved. By medical treatmt.	Discharged. Relieved. By operation.	Natives, admitted.	Discharged. Cured. By medical treatmt.	Discharged. Cured. By operation.	Discharged. Relieved. By medical treatmt.	Discharged. Relieved. By operation.
Patients with total loss of sight......	[a] 17	2	4	3	1	[a] 59	5	9	9	4
Do. with partial loss of sight.....	[b] 37	19	0	12	1	[b] 28	11	1	7	0
Do. not included under the two preceding heads...........	[c] 23	21	2	4	0	[c] 12	8	1	0	0
Total admissions.....	77	42	6	19	2	99	24	11	16	4

[a] Amaurosis......Eur. 2..Nat. 10   [b] Amaurosis..Eur. 9 Nat. 6
Cataract.........Eur. 6..Nat. 10   Cataract......Eur. 0 Nat. 3
Ophthalmy acute and chronic..Eur. 10 Nat. 3
[c] Ophthalmy acute, chronic, and suppurative...Eur. 16 Nat. 8
Night blindness..........................Eur. 4 Nat. 8

CIVIL.

	Europeans, admitted.	Discharged. Cured. By medical treatmt.	Discharged. Cured. By operation.	Discharged. Reliev-ed. By medical treatmt.	Discharged. Reliev-ed. By operation.	Natives, admitted.	Discharged. Cured. By medical treatmt.	Discharged. Cured. By operation.	Discharged. Reliev'd. By medical treatmt.	Discharged. Reliev'd. By operation.
Patients, with total loss of sight..................	[a] 3	1	1	1	0	[a] 672	98	146	131	46
Do. with partial loss of sight	[b] 17	12	0	4	0	[b] 1267	728	9	419	0
Do. not included under the two preceding heads....	[c] 6	6	0	0	0	[c] 926	922	19	26	3
Total admissions....	26	19	1	5	0	2865	1748	174	576	49

[a] Amaurosis....Eur. 0 Nat....71   [b] Amaurosis....Eur. 1 Nat. 582
Cataract......Eur. 1 Nat.. 289   Cataract......Eur. 1 Nat. 394
Nebula.......Eur. 2 Nat. 36
Ophthalmy acute and chronic with ulceration of the cornea &c.... } Eur. 3 Nat. 33
[c] Ophthalmy acute, chronic, and suppurative... Eur. 5 Nat. 224
Night blindness.......................... Eur. 0 Nat. 618

OUT PATIENTS.

	* Europeans and Natives, admitted.	Discharged. Cured. By medical treatment.	Cured. By operation.	Relieved. By medical treatment.	Relieved. By operation.
Patients, with total loss of sight........	[a] 161	34	34	45	5
Do. with partial loss of sight....	[b] 341	268	5	72	0
Do. not included under the two preceding heads	[c] 224	237	13	19	1
Total admissions....	726	539	52	136	6

[a] Amaurosis 11..............
Cataract 60........... ..

[b] Amaurosis.......... ... 85
Cataract incipient........ 51
Ophthalmy acute, chronic, and suppurative, with ulcerated cornea ... . } 48
Nebula.................. 19
Albugo.................. 14

[c] Ophthalmy acute, chronic and suppurative..... 117
Night blindness.................................... 42

Ophthalmia. In the treatment of this disease the application of the solution of the nitrate of silver, 4 to 8 grains to the ounce of water combined with the free use of the extract of belladona, has been attended very generally with immediate benefit; the latter remedy having been found useful in allaying irritation and pain both in the acute and chronic stages. In one case of *iritis* from injury, it had the effect of lessening the pain and inflammation, after the usual remedies had failed—and its application four times daily, restored the eye to its perfect function, the cornea assuming a healthy appearance, and the pupil recovering its natural size, without any other remedy. In the disease called "*country sore eye*" the application of belladona in the first instance, followed by an ointment containing the nitrate of silver, has been found to have a decided effect in checking the disease.

* The number remaining December 1829 are not included in the column of admissions, which will explain the increase in several of the other columns under the head "discharged."

In several cases of vascularity and ulceration of the cornea, in constitutions of a scrofulous nature, the hydriodate of potash has been used with good effect; after this remedy has been exhibited for some time, the cornea is observed, gradually to become clear, and the ulcer to heal, when the usual stimulating application completes the cure; and in some cases of this nature, where total blindness existed, sight has been restored by this mode of treatment.

Night blindness. *Night Blindness*, is a very prevalent disease in this country, the above tables show that it forms nearly one-fifth of the admissions. It has been found to be principally confined to the native agriculturists and artisans, and is seldom met with in the European, and but rarely in the Indo-briton.

The alleged causes of this disease are, exposure to the strong dazzling light and ardent heat of a tropical sun, by day, and to chilling dews by night, severe attacks of fever, scanty and bad food, a disordered state of the alvine secretions, and worms; females have likewise been frequently observed to be affected with this complaint, after parturition.

This affection is considered by the oculist to be of more importance than is generally admitted, and he is of opinion that many of the cases of amaurosis and cataract treated in the infirmary, have had their commencement in night blindness.

Cataract. Cases of *incipient cataract* were formerly permitted to remain in hospital till the disease became completely formed, or they were operated upon at an early stage of the disease; they are now treated by mercurials, repeated counter irritation, blisters over the brows, local depletion by leeches from the neighbourhood of the eye and the nape of the neck, with repeated moxas and galvanism; by which, in some cases, the opacity disappears, and in others it is so much removed, as to permit the individual to have a useful share of vision, thus obviating in many instances the necessity for operation.

The operation generally preferred in this institution is "*depression*;" as the cornea of the native in most cases either sloughs, or is so slow in uniting, as to require even a stimulus to excite a salutary degree of inflammation, after the operation of "*extraction*."

Several of the cases treated were those named "Morgagnian cataract;" on opening the capsule, of this form of the disease, the anterior chamber becomes either entirely, or partially filled with a milky fluid; the lenses were generally small, though in some cases they were found to be large and soft. When the lens could be removed from the axis of vision, either by depression or reclination, it was effected; it has been observed that inflammation is more likely to set in, after an operation in this description of cataract, than in any other; should the lens be allowed to remain *in situ*, its absorption gradually takes place, and it ultimately disappears, if the inflammatory symptoms are quickly subdued. A case of congenital cataract of both eyes in a youth of 18 years of age, was operated upon in the year 1831, with complete success.

Diseases of the Cornea. The diseases of the cornea have been numerous; in ulceration with vascularity, the *potassii iodidum* and *quinœ disulphas* have been found most valuable remedies, in combination, or administered separately, according to circumstances. In some of the cases before a healthy action could be produced, the mouth was obliged to be slightly affected with mercury, when the above remedies acted very satisfactorily.

Amaurosis. The majority of this class of cases have been admitted with partial loss of sight, depending principally upon exposure to the sun during the day, and chills during the night; in many instances the result of febrile disease, and inanition succeeding parturition. Strychnia both internally and externally has had a fair trial, but except in two instances it has not been followed with any success; it was carried in these two cases to the extent of one grain, morning and evening.

MALE ORPHAN ASYLUM.

Site and description. This Asylum was established in the year 1784, for the maintenance, support, and education of destitute orphan sons of the European military, on the Madras establishment.

It is situated at Egmore, nearly two miles west from the Fort, in an enclosure of about 20 english acres in extent; the ground having a slight rise towards the site of the building. The soil is a mixture of loam and sand covered with turf, and with the exception of a few trees, there is no other vegetation.

The building is of two stories and terraced, facing due south; the upper story being entirely appropriated for schoolrooms and sleeping apartments, and the lower as a dining room; there is also a large nursery in a separate building for younger children, with every suitable convenience and comfort; baths, &c. being amply provided. The entire building is calculated to contain 380 boys.

The water though abundant is brackish, and can only be used for cooking and bathing; that for drinking is brought from the seven wells in Black-town, formerly described.

A great majority of the inmates of the institution are Indo-britons, very few being of pure European blood; their ages vary from four, to eighteen years.

Hospital. The hospital attached to the institution is a separate building of two stories, terraced, and capable of containing sixty patients. The upper story is set apart for medical cases, and the lower for other diseases, such as itch, ophthalmia, &c.

Diseases. The average annual number of admissions into hospital for ten years,* exclusive of itch, and 3,533 cases of disease of the eye, has been 278; and the average annual number of deaths during the same time, 8; but ex-

* From 1829 to 1838 inclusive.

cluding deaths from cholera, the number is reduced to 5, the average annual strength for the same period being 380. The diseases from which the largest mortality occurred, have been cholera, dysentery, fever, and rubeola of which last 158 cases were treated, with six deaths.

Ophthalmia. *Ophthalmia* has been very prevalent in the institution till within the last few years. In the beginning of the year 1835, the disease became remarkably frequent; and although in many cases it was proved to have arisen from the ordinary exciting causes, it was believed at that time, to have acquired somewhat of a contagious character, justly attributable to the imperfect ventilation of the sleeping apartments, the atmosphere in which was found to be close and sickening, not only at night, but also during the day. The whole building was purified with the chloride of lime, and attention paid to the full and free ventilation of the nurseries, and dormitories; the result of which at the end of three or four months, was highly satisfactory.

Since that time venetian shutters of a green colour, have been placed in the windows, ventilators opened on the roof, and all the rooms of the house painted of a stone colour; and, during the two years, ending December 1838, only 293 cases of ophthalmic disease have been admitted, while in the two preceding years, 1057 were treated.

The general health of the institution has been greatly improved by the same means; for, taking the two first years, and the two last of the period embraced in these remarks, it is found, that 515 admissions occur in the first period, with 16 deaths; and 286, in the second period, with 7 deaths; excluding in both instances, the admissions from diseases of the skin and eye, those of the latter in the first period, amounting to no less than 680.

It is in contemplation to erect a more substantial nursery in place of the present one, which is a pent roof building, and this it is expected will improve still more the health of the inmates of this useful institution.

FEMALE ORPHAN ASYLUM.

Site and description of Asylum.

The sister institution to the preceding was established in the year 1787, and for like benevolent purposes, for the destitute orphan female children, of the European military, on this establishment.

It is situated at Chetputt, a retired part of the suburbs, about four miles directly inland from the Fort, in an equally extensive enclosure of ground, presenting a flat surface of turf, interspersed with a few trees, and surrounded by a hedge. The site is open high and dry, and the soil sandy.

The house is a long building facing the east, two storied and terraced, and capable of accommodating four hundred persons. The school rooms, and dormitories are on the upper story, and the dining hall on the ground floor, as also a very large room for recreation in wet weather; it is well ventilated, light and air being regulated by venetian shutters; and also amply supplied with good water and provided with a comfortable commodious bath room, and other conveniences.

The inmates of this institution are chiefly Indo-britons, the ages varying from *four* to *thirty* years.

Hospital.

The hospital is a separate building of two stories and terraced, facing the south; is well ventilated, and capable of containing thirty patients.

Disease.

The average annual number of admissions into hospital for ten years,* exclusive of diseases of the eye and skin, has been 254; and the annual number of deaths

* From 1829 to 1838 inclusive.

for the same period, scarcely 4; but excluding deaths from cholera, the number is reduced to 2½ annually; the average annual strength during the same time has been 374; thus showing a degree of health scarcely equalled, and certainly not surpassed in any establishment of the kind in Europe.

The most fatal diseases have been cholera, dysentery, and fever, as in the other institution.

The diet in the two establishments, during the period embraced by these remarks, has been equally good, well regulated and varied; so that the cause of the difference in the health and mortality in the one institution, compared with the other, cannot be looked for in the quality or nature of the food; it is thought to be correctly attributed, to the greater exposure of the inmates of the one, to the ordinary exciting causes of disease, from the natural habits of the boys, and the consequent greater amount of febrile disease amongst them, of a more acute nature; and the impaired constitutions of the boys from the badly ventilated state of the Male Asylum, previous to the year 1835 as before adverted to.

The following tables show the amount of febrile and other forms of acute disease, and the mortality attending them in both Asylums, for ten years ending in December 1838.

MALE ASYLUM.	Aggregate strength 3,803. From 1829 to 1838. 1st Half.		2d Half.		Total.		Average annual percentage of sick to strength.	Average percentage of deaths to sick.
	Adm	died	Adm	died	Adm	died		
Fevers	367	5	454	8	821	13	21·588	1·583
Dysentery, acute & chronic	72	2	119	10	191	12	5·022	6·282
Cholera	21	7	52	23	83	30	2·182	36·144
Variola	9	1	1	0	10	1	0·262	10·0
Varicella	90	0	3	0	93	0	2·445	0·0
Rubeola	157	6	1	0	158	6	4·154	3·797

FEMALE ASYLUM.	Aggregate strength. 3747. From 1829 to 1838. 1st Half.		2d Half.		Total.		Average annual percentage of sick to strength.	Average percentage of deaths to sick.
	Adm	died	Adm	died	Adm	died		
Fevers	124	4	200	1	324	5	8 ·646	1 ·543
Dysentery, acute & chronic	26*	3	35	4	61	7	1 ·627	11 ·475
Cholera	11	10	7	3	18	13	0 ·480	72 ·222
Variola	0	0	0	0	0	0	0 ·0	0 ·0
Varicella	57	0	4	0	61	0	1 ·627	0 ·0
Rubeola	85	0	0	0	85	0	2 ·268	0 ·0

Having given for each institution a statement of the average results of disease for ten years, it seems necessary to notice here, the influence of unhealthy seasons in increasing both the sickness and mortality. In 1833, from the total want of the periodical rains, the intense heat, and consequent failure of thé crops, sickness prevailed to a vast extent throughout the greater part of this presidency; and although the inmates of these institutions did not suffer from any deficiency or want of food, yet they exhibited the influence of that concealed morbid cause, which was acting so very generally, and induced in them a disposition to marasmus, atrophy, cholera, bowel complaints, and scurvy, with a state of system in which the vital powers were much depressed; the

* Worms (lumbrici) were a frequent cause of this disease, and occurred in vast numbers, in several instances; in onc the intestines appeared filled with them, and they were found even in the stomach and æsophagus; and in anothcr case 460 were removed from the body of a small child.

At one time during the prevalence of small pox, when vaccination was had recourse to, to check its progress, the following case occurred, an example of which is not often witnessed, viz. that of the co-existence of the vaccine and variolous disease in the same individual. The subject was a boy, 15 years of age, who was inoculated with the vaccine virus on the 7th of the month; his general health continued prctty good, until the evening of the 11th, when febrile symptoms commenced. The vaccine pustules advanced very slowly but werc well marked; on the 17th they had the appcarance which that disease commonly presents, on the 7th day; on the 22d the crusts were about falling off. Thc variolous eruption which was of the confluent kind did not appear till the 16th of thc same month, by thc 20th the pustulcs on thc surface were fully maturatcd, and the crusts fcll off about the 30th. *The disease proved mild, and the secondary fever was slight and of short duration.*

consequenee was a vast increase of sickness and mortality, from the want of that energy so necessary to a successful rallying of the powers of life, after the more violent, and apparently more dangerous symptoms of disease, have been overcome. In that year there were,

In the Male Asylum.			*In the Female Asylum.*		
Adm.	deaths.	strength	Adm.	deaths.	strength
599	*32	374	413	†9	391

* 14 By Cholera. † 3 By Cholera.

PRISONS.

Site and description of Jails.

The Prisons of Madras are three in number, the Supreme Court; the Convict; and the Police, or Magistrate's jail; all of which are situated in Black-town.

The Supreme Court jail, erected in 1807, stands close to the north wall of the town. It is of a square form, and consists of several buildings, enclosed by a double wall, of two stories, for the different classes of prisoners, debtors, criminals, and felons; the upper stories being occupied but not exclusively by Europeans. The apartments are all well ventilated, and kept clean; and there is a spacious piece of ground between the walls, to allow the prisoners to take exercise when necessary; the whole prison is calculated to contain about 100 prisoners.

The hospital is an upper storied, terraced, brick building, situated at the north side of the jail, but quite unconnected with it, being placed in a distinct area, measuring 80 by 40 feet, surrounded by a high wall. It measures 40 feet by 19, and can accommodate twenty patients. The apartments are well ventilated, by doors and windows.

The site of these buildings is rather low, and in the monsoon season much water lodges in the vicinity.

Convict Jail.

The bomb-proofs of one of the bastions on the north rampart of the town form the convict jail; it is situated near the Supreme Court jail, and is exclusively appropriated for natives. The cells or arches, and floors are constructed of granite, the doors and windows all opening into a small centre area; the ventilation is therefore from the nature of

the building very imperfect; it is close and confined, and generally very much crowded; yet its inmates, as will be seen below, appear to enjoy good health.

The hospital of this prison is a small pent roof building, at one side of the entrance, and affords accommodation for eight patients; it is not well ventilated, and on this account any cases of severe disease, which may occur, are removed to the native infirmary.

The Police jail is situated in one of the streets of Black-town; it is used merely as a temporary prison, and for short periods of confinement, both for Europeans and natives; the cells are all arched, and well ventilated by doors and windows. There is no hospital attached to this jail.

Labour and diet, &c.

The native convicts only are sentenced to hard labour, in irons, and work from 6 A. M. till 5 P. M., generally on the roads. They are dieted and clothed by the Commissariat department agreeably to the annexed scale.

Statement shewing the weekly consumption and average cost of provisions and clothing supplied by the Commissariat to each native prisoner in these different jails.

	Rs.	A.	P.	Rs.	A.	P.
7 Seers of Rice	0	6	6			
$\frac{21}{100}$ do. of Salt	0	0	1			
$2\frac{2}{20}$ Pollam of Chillies	0	0	3			
$\frac{7}{40}$ do. of Pepper	0	0	1			
$5\frac{1}{4}$ do. of Tamarind	0	0	3			
Curry Stuff	0	0	1			
Curries	0	0	7			
Firewood	0	0	6			
				0	8	4
Clothing, &c.				0	0	7
Total Company's Rupees				0	8	11

Statement shewing the weekly consumption and average cost of diet and clothing supplied by the Commissariat to each European prisoner in these different jails.

	Rs.	A.	P.	
℔ Oz.				
0 3½ of Tea	0	3	1	
0 7 of Sugar	0	1	1	
2 1¼ of Rice	0	1	0	
14 No. of loaves of Bread, equal to 7 ℔s	0	8	9	
P. D.				
2 4 of Milk	0	2	1	
5¼ ℔s. of Mutton	0	10	6	
Curry Stuff	0	0	6	
Firewood	0	1	8	
				1 12 8
Clothing, &c	0	6	2	
Shoes, Soap, &c	0	2	1	
				0 8 3
Total Company's Rupees				2 4 11

Diseases. The following table No. 3 shows the amount of disease amongst the convicted prisoners, for a period of ten years, in the Madras Jails; the table includes both Europeans and natives, there being no separate returns, but the proportion of Europeans is very small. The amount of mortality cannot be accurately ascertained, the worst cases of disease, as already noticed, being removed to the native infirmary, and included in the returns of the sick of that institution, the number of transfers is however very trifling, amounting in the period embraced in these remarks only to 52.

BLACK-TOWN JAIL.

No. 3.—*Table exhibiting the Number of Admissions and Deaths of the "Convicted Prisoners," from each Class of Disease for* 10 *years, from* 1829 *to* 1838 *inclusive.*

CLASSES.	DISEASES.	From 1829 to 1838. Aggregate strength 2,730. 1st Half. Adm.	Died.	2d Half. Adm.	Died.	Admissions and Deaths from each class of Disease. 1st Half. Adm.	Died.	2d Half. Adm.	Died.	Total admissions from each Class.	Total deaths from each Class.	Average annual percentage of sick to strength.	Average per-centage of deaths to sick.
Fevers	Febris ephemera	330	0	500	0								
	„ intermitt. quot.	3	1	3	0								
	„ „ tertian	0	0	0	0	365	2	512	1	877	3	32 ·124	0 ·342
	„ remittens	32	1	9	1								
	„ continua	0	0	0	0								
	Cholera	1	1	11	8	1	1	11	8	12	9	0 ·439	75 ·0
Diseases of the Abdominal viscera	Diarrhœa	118	1	126	0								
	Dysenteria acuta et chronica	20	1	26	0	143	2	163	0	306	2	11 ·208	0 ·653
	Dyspepsia	5	0	11	0								
	Hepatitis acuta et chronica	4	0	2	0	4	0	2	0	6	0	0 ·219	0 ·0
Diseases of the Lungs	Catarrhus	6	1	5	1								
	Asthma	1	0	0	0								
	Phthisis pulmonalis	[illegible]	[illegible]	[illegible]	[illegible]	10	1	5	1	15	2	0 ·549	13 ·333

Diseases of the Brain...	Epilepsia....................	2	0	0	0	5	0	0	0	5	0	0 ·183	0 ·0
	Paralysis......................	2	0	0	0								
	Mania...........................	1	0	0	0								
Eruptive fevers..... ...	Variola.................	2	0	3	0	106	0	43	0	149	0	5 ·457	0 ·0
	Varicella	102	0	40	0								
	Rubeola	2	0	0	0								
	Erysipelas......................	0	0	0	0								
Dropsies...........	Anasarca	6	0	5	1	6	0	6	1	12	1	0 ·439	8 ·333
	Ascites....	0	0	1	0								
Rheumatic affections....	Rheumatism. acut. et chronicus.	9	0	10	0	9	0	10	0	19	0	0 ·695	0 ·0
Venereal affections......	Syphilis primitiva.............	6	0	2	0	19	0	8	0	27	0	0 ·989	0 ·0
	Gonorrhœa......................	7	0	2	0								
	Hernia Humoralis...........	6	0	4	0								
Specific diseases........	Atrophia....	14	2	14	5	32	3	28	7	60	10	2 ·197	16 ·666
	Beriberi....	0	0	4	1								
	Lepra............................	3	0	6	1								
	Dracunculus......................	8	0	0	0								
	Scrophula........................	7	1	4	0								
Do. of the Eye........	Morbi Oculorum................	6	0	12	0	6	0	12	0	18	0	0 ·659	0 ·0
Do. of the Skin........	,, Cutis..................	10	0	8	0	10	0	8	0	18	0	0 ·659	0 ·0
	Other diseases................	1,518	1	1,727	0	1,518	1	1,727	0	*3,245	1	118 ·864	0 ·030
	Total....	2,234	10	2.535	18	2,234	10	2,535	18	4,769	28	174 ·688	0 ·587

* Iucludes 2,822 cases of Punitio.

Health of the Convicts.

The average annual strength for 10 years, has been 273; and, excluding 2,822 cases of "*Punitio*,"* from the amount of admissions, the average annual number of sick is found to be only 194, or 71 per cent on the strength; the mortality during the same period being 3 annually, and excluding cholera only 2; which is at the rate in the first case of one per cent, on the strength; and only 1½ on the sick treated; and in the latter instance, is only ⅔ per cent, on the strength, and one on the sick treated. It is worthy also of remark that eleven of the fatal cases occurred in 1833. This statement which does not include the results in the 52 cases of acute disease transferred, as before stated, to the native infirmary, shows a surprising degree of health, and this too notwithstanding that the convicts are so badly housed; they are regular however at their daily labour, but not overworked, their diet is good, and in due quantity, and served out to them at stated hours.

* The cases of *Punitio* are never so severe as to unfit the prisoners for labour for more than 24 hours; the number of stripes inflicted being restricted to three dozens, but seldom exceed two dozen.

GARRISON OF FORT ST. GEORGE.

Garrison of Fort St. George European Troops.

The European force stationed at Madras, for many years past, has been one Regiment of Her Majesty's infantry, and two companies of Artillery, all of whom are quartered in Fort St. George, which is an irregular polygon somewhat in the form of a semi-circle, of which the sea face is nearly a diameter, running north and south, and presenting a clear front on that side of five hundred yards. The sea flows to within a few yards of the ramparts, which are fenced by an artificial barrier of stone work from the influence of the surf and tide; the foundation of the works on the sea face contains a series of cisterns, which are filled with fresh water from the wells formerly mentioned, as situated at the northern extremity of Black-town.

The Fort presents a double line of strong fortifications towards the land side, both bombproof; the inner one constructed so as to afford accommodation to a large body of troops, but which is not at present made available for this purpose, except a small portion occupied by the Artillery and occasionally by recruits on arrival from Europe.

Public Offices.

Within the Fort are the offices of Government, and of the various Public departments, and the barracks for the European troops.

Barracks.

The barrack is situated at the north and western extremity, is of an oblong form, its length running north and south; it is terraced and of two stories, and said to be capable of accommodating 1,000 men; the officers occupy the upper, and the men the lower story. The buildings in its vicinity greatly obstruct the access of air and its construction prevents free ventilation, in the lower story especially; for it will be readily perceived, that the eastern range shuts out the sea breeze, from the western, and the western range in like manner precludes the access of the land winds, to the opposite side

of the building; besides, these winds waft the impure air from the windward to the leeward range; *i. e.* when the sea breeze prevails, the atmosphere in the western ranges becomes close and extremely disagreeable; and when the land wind prevails, the eastern side is in a similar state. These defects have been but partially remedied by the improved mode of ventilation recently adopted, viz. air holes cut through the walls near the ceiling, with the view of producing a constant current of air through the apartments. This plan of ventilation, (so common in the hospitals and public institutions in Europe, and first recommended by "Hennen," who also advised similar apertures to be made at the bottom of the wall, the openings of each being covered with an iron plate perforated with small holes, or a wire frame work, to break the force of the wind,) has been found to answer well in buildings of a single range, but it must be evident that in one constructed like these barracks, its efficacy can be but trifling; and the state of the atmosphere in the apartments furnished with the ventilators, has been found to be but little influenced by them, being still very impure.

All the apartments and the area in the centre of the quadrangle are paved with stone, and kept clean. The drains are said to be low and in some measure defective, and consequently impurities sometimes stagnate and give rise to unpleasant odours.

The upper story of the building is divided into separate apartments for the officers and from its elevation it is of course better ventilated.

It has generally been found when a regiment is complete in numbers, that the lower story does not afford sufficient accommodation; there being no parchery,* or other buildings, in the fort for the married men and families, one end of the lower range is therefore given up to them, and two companies are accommodated upstairs.

* A collection of cottages occupied by married soldiers.

It would be advisable perhaps from the circumstances now stated, and also from the European regiments having been increased to 1,000 men each, to remove the officers to some convenient building in the neighbourhood, and give up the entire barrack to the soldiery; this arrangement would add much to the comfort of the troops, and at the same time be conducive to their health.

Duties and employment of the Soldiery.

For the most part, the men are occupied in the ordinary routine peaceable garrison and regimental duties of guards, drills, parades, &c. nor have these latter it is believed been carried to such an extent as to distress them; some of the guard rooms are said to be ill ventilated, and others to afford but an imperfect protection from the effects of the sun.

The time of the soldier when off duty being his own, and having no employment it becomes irksome to him and passes heavily away; and the tedium of having nothing to do but too frequently leads to bad habits and intemperance, and his daily allowance of spirits (six ounces) is exceeded on every opportunity; to prevent the baneful consequences of idleness, a reading room or library has been lately opened which there is every reason to believe will be attended with good effects; it would be advisable also to employ the soldier in handicraft, such as making of shoes, shirts, stockings, stocks, &c.; these observations are here introduced from observing the very partial influence, the institution of temperance societies, has as yet exerted in European regiments, in India.

Diet.

As to the diet of the men, it has always been unexceptionable both in quantity, and quality, but the allowance of animal food (one pound of meat daily), is perhaps too large.

The hospital has been described in the account already given of the general hospital, one half of which is appropriated for the sick of Her Majesty's regiment. In seasons of severe sickness, or when Cholera occurs, its distance from the

barracks (about half a mile) has been found to be very inconvenient.

Diseases of European Troops. The most fatal diseases have been *cholera*, *dysentery*, *hepatitis*, and *fever*.

The exciting causes of these diseases, assigned by the medical officers, are the general influence of the increased temperature of a tropical climate, upon the European constitution; exposure to the ardent heat of the sun; the effects of the scorching winds during a part of the year, and heavy dews by night, at other seasons; the badly ventilated state of the barracks and guard rooms; and, the intemperate habits of the men.

The general table of European military sick, shows the nature, and amount of disease, and mortality during a period of 10 years from 1829, to 1838 inclusive; but, as it includes also, the sick of the Honorable Company's European Artillery the following table comprising only that of Her Majesty's regiments, stationed in this garrison is given for 7 years, from 1832, to 1838 inclusive.

DISEASES.	Average strength 579. Aggregate strength 4055.				Total admissions.	Total deaths.	Average annual percentage of sick to strength.	Average percentage of deaths to sick.
	1st Half.		2d Half.					
	Adm	died	Adm	died				
Fevers	975	6	769	4	* 1744	10	43 ·008	0 ·573
Cholera	38	12	73	36	111	48	2 ·737	43 ·243
Diarrhœa	231	0	338	4	569	4	14 ·032	0 ·703
Dysenteria acuta	369	18	714	36	1083	54	26 ·707	4 ·986
,, Chronica.	34	3	30	3	64	6	1 ·578	9 ·375
Hepatitis acuta	227	7	227	9	454	16	11 ·196	3 ·524
,, Chronica	57	4	46	3	103	7	2 ·540	6 ·796
Catarrhus	242	1	286	0	528	1	13 ·020	0 ·189
Phthisis pulmonalis	3	1	4	4	7	5	0 ·172	71 ·428
Hœmoptysis	11	0	7	1	18	1	0 ·443	5 ·555
Pneumonia	49	1	68	3	117	4	2 ·885	3 ·418
Rheumatism acutus	239	0	267	0	506	0	12 ·478	0 ·0
,, Chronicus	83	0	75	0	158	0	3 ·896	0 ·0
Other diseases	2405	12	2490	9	4895	21	120 ·715	0 ·429
Total	4963	65	5394	112	10357	177	255 ·413	1 ·708

* Ephemeral.. 76 .... Remittent 2.
Intermitt... 10...... Continued 1656.

Fevers. In the foregoing table, the class "Fevers" will be observed to form one-sixth of the whole admissions, the continued, and ephemeral being the most prevalent forms; the fact that the amount of mortality, is only one death, in every one hundred and seventy-four patients treated, sufficiently shews the very tractable nature of these diseases.

Diseases of this class are generally presented early for treatment, the head-ache, with the overpowering lassitude, and weakness, and general feeling of soreness over the body, with which they commence, prostrate the patient at once, incapacitate him from the performance of his duty, and compel him to seek for relief. The fever most prevalent here is the continued, which, in the early stage is easily cut short, and the disease may almost always be subdued by a general bleeding, or the application of leeches to the temples when requisite, and in other instances without these measures, by an active purgative aided by 4, or 5 grains of calomel, and an equal quantity of James's powder at bed time, followed up next day by the saline antimonial solution. The blood in such cases is seldom buffed, but the crassamentum is always firm.

Continued Fever. Cases however of continued fever of a severe form occur, in which, when the symptoms have been allowed to go on for a day or two unchecked, some important organ becomes involved, the brain and liver in particular at this station being liable to be effected, and congestion may exist in either or both of these organs on the admission of the patient. Such cases, of what may be called the congestive form of fever, require much discrimination and tact in the treatment; general bleeding should be less freely practiced, but the local abstraction of blood is urgently required, by which, with free purging and the judicious use of mercury, to obtain its anti-inflammatory action on the system and equalishing effect on the circulation, the local complication is removed, and the inflammatory state of the system subdued; the mercury is best given for

this purpose in the form of calomel in four grain doses, as before mentioned, with the same quantity of James's powder, and repeated three or four times daily. In such cases it has been frequently observed, that the symptoms within a few days assume a typhoid type, with a dark dry tongue, and a petechial skin, but in no instance has the disease acquired the contagious property of the typhus of Europe, although in many other respects it may be said to be the same disease; its duration seldom exceeds 7 or 8 days, but a comatose state, as in typhus, precedes death.

Remittent & Intermittent Fevers. The *remittent* and *intermittent forms of fever* will be observed to be of rare occurrence at Madras, two of the first, and ten of the second type having only been recorded by the medical officers of Her Majesty's service in the whole number of this class, 1744; the sources of these fevers, are not found to exist in a virulent or extensive degree in or near Madras, and the greater number of the cases which are entered in the tables of the sick of the General hospital, European and native, have been transferred from out stations, or were received from on board-ship, from Bombay, Calcutta and the eastern ports.

Cholera. *Cholera*, it will be observed has been attended with its usual high rate of mortality, it has occasioned fully a fourth part of all the deaths; nothing particular has been remarked in the treatment; latterly warm saline enemata, frequently exhibited, as recommended by Dr. Murray Inspector of H. M.'s hospitals, have been thought beneficial in rousing the system from the collapsed state, and in many instances, it has contributed essentially to the recovery of the patient. Quinine in ten grain doses given before the stage of collapse set in, has had in many instances a good effect in checking the course of the disease.

Dysentery. *Dysentery*, forms nearly a tenth part of the whole admissions, and the mortality caused by it, amounts to a third part of all the deaths; the ratio of mortality from this disease on the sick treated, is about 5 per cent, and it is worthy of remark that during the seven years included in

the foregoing tables it has been steadily at the same ratio, except in 1834 when it amounted to fully 10 per cent.

Fortunate indeed would it be for the soldier, and greatly less harassing to the anxious mind of the physician, were this disease ushered in with less equivocal symptoms than it often is. In numerous instances, and in many of the fatal cases, it has been noted, that the patients had been going about, suffering under the disease for four, five and six days, and apparently not aware of their dangerous state; and in many of them it has been observed, that febrile symptoms, neither preceded, nor attended the disease throughout its whole course; and generally when fever was present it was slight.

The porportion of cases complicated with hepatic disease, cannot be ascertained, but they are known to have been of very frequent occurrence, and abscess in the liver has been found occasionally after death.

The treatment by the several medical officers of Her Majesty's regiments, during the time included in these remarks, has varied but little; and consisted of general and local bleeding, calomel and ipecacuan, each in five or ten grain doses, three times daily, with or without opium; blue pill having been occasionally substituted for the calomel; oily laxatives; blisters and antimonial ointment to the abdomen; the patient being restricted to a low mild diet; and tonics exhibited during convalescence. The greatest number of cases of this disease and diarrhœa have occurred at the beginning of, and during the wet season.

Hepatitis. *Hepatitis*, is next in importance, the proportion of cases being about a twenty-third part of all the admissions; and an eighth part of all the mortality being occasioned by it. When early presented for treatment, it has been in general easily removed by depletion, general and local; purgatives; and mercury continued till its specific effect on the system was produced. When the untoward termination in abscess

has taken place, which in most instances can be easily recognised from the history of the case, attention to the constitutional symptoms, and the persistence of tension over the epigastric space; an early and free exit to the matter, before the strength of the patient has become much sunk, is of great importance; the mode of puncturing the liver recommended, and adopted by the late Doctor Murray, bids fair to be of advantage in such cases; he employed a long flat trocar, which he introduced between the cartilages of the 7th, 8th or 9th ribs or epigastrum as circumstances pointed out; occasionally an exploratory needle (a very small, flat, canular instrument) having been previously introduced to ascertain the presence of matter; in no case even in those where an abscess had not been present, has either the puncture of the needle, or the wound of the trocar been followed with peritonitic inflammation, or effusion into the abdomen either of blood, or pus; adhesive inflammation appearing from post mortem examinations to have been excited within twenty-four hours, round the aperture; and by keeping the canula inserted for that length of time all chance of the escape of matter into the abdomen is averted; further it is observed, that the peculiar function of the abdominal muscles, which is to keep the viscera in constant contact with each other, tends greatly to prevent effusion from any collapse of the liver, on the evacuation of the contents of an abscess. Within the last few years, Dr. Murray operated in 17 cases without any bad consequences following, and six of his patients have recovered. By giving an early exit to the matter and employing the necessary constitutional treatment (such as mild alteratives with tonics, and counter irritation,) the chances of recovery are much increased. In cases where more than one abscess may exist, it has been objected, that this operation must be ineffectual; but it cannot be more so, than a delay in waiting till they enlarge or coalesce, on the contrary it is highly probable that the evacuation of one, may lead to the pointing of the others towards the emptied cyst.

Diseases of the Chest.

The diseases of the chest will be observed to be rather numerous, but the mortality except from

phthisis is not great, in these cases the disease had been excited either in Europe, or in New South Wales, from whence H. M.'s regiments frequently arrive.

It would have been desirable to have contrasted the sickness and mortality of the European Artillery stationed in the Fort, with that in H. M.'s regiments, but this cannot be accomplished, as the sick of the Artillery are treated in the general hospital, and embodied in the returns of that institution. It is generally acknowledged however, that they are more healthy, from their quarters being more airy, and the nature of their duties requiring less exposure either by day or night.

General remarks on the table of European military sick.

The general table No. 4 of European military sick for ten years, which includes those of Her Majesty's regiments, the Artillery, Ordnance department, Artificers, which latter with the Non-Commissioned Staff of the garrison, are treated in the general hospital, will shew clearly the total amount of sickness and mortality from the most important diseases, during that period, for each half year, with the percentage of sick to strength, and deaths to disease.

It will be observed that a considerable increase in both sickness and mortality, occur during the second half of the year, being caused principally by cholera, diarrhœa, dysentery.

The average annual percentage of sick, to strength, has been 186; of mortality, to sick treated, $2\frac{1}{3}$; of deaths, to strength, $4\frac{1}{5}$ annually, which proportions have been pretty uniform throughout the whole period; in 1837, the proportion of deaths to strength, is double the average now stated, the increase of the mortality that year having been occasioned by cholera.

The nomenclature of diseases having been altered and enlarged in 1833, by order of the Medical Board another

more comprehensive table No. 5 is appended exhibiting the specific diseases in each of the classes therein mentioned, during a period of five years, from 1834, to 1838 inclusive. The total of each class of disease is shewn, with the mortality, and the percentage of admissions to the strength, and of deaths to the number treated.

The most numerous admissions have been from the class of *fevers, abdominal complaints, venereal, rheumatism,* and *diseases of the liver,* of the *lungs* and of the *brain;* and the greatest mortality has been caused by *cholera,* (which is kept distinct in the table, and placed next to the class of fevers) *liver,* and *bowel complaints, diseases of the lungs,* and *dropsies,* the average percentage of sick to strength, during these five years, being 221, and of deaths to sick treated, about $2\frac{1}{5}$th; of deaths to strength 4·895.

The sickness and mortality amongst the officers has been very small, as the following table shews; it comprises seven complete years.

OFFICERS OF HER MAJESTY'S REGIMENTS.

CLASSES.	DISEASES.	Aggregate strength 207. Adm	died	Admissions and deaths from each class of disease. Adm.	died	Average annual percentage of sick to strength.	Average percentage of deaths to sick.
Fevers....	Febris ephemera....	1	0				
	,, remittens....	2	0	93	3	44 ·927	3 ·225
	,, continua.....	90	3				
	Cholera............	2	0	2	0	0 ·966	0 ·0
Diseases of the Abdominal viscera...	Diarrhœa.........	11	0				
	Dysenteria acuta et chronica.........	18	0				
	Colica............	15	0				
	Obstipatio...... ...	9	1	78	2	37 ·681	2 ·564
	Hæmorrhois........	6	0				
	Enteritis...........	2	1				
	Dyspepsia..........	17	0				
	Hepat. ac. et chron.	15	0	15	0	7 ·246	0 .0
Do. Lungs.	Catarrhus..........	37	0				
	Hœmoptysis........	1	0	39	0	18 ·940	0 ·0
	Pleuritis...........	1	0				
Do. Brain..	Apoplexia,.	2	2				
	Epilepsia..........	8	0				
	Paralysis..........	1	0	12	2	5 ·797	16 ·666
	Delirium Tremens et Ebrietas.......	1	0				
Do. Eye..	Morbi Oculorum...	2	0	2	0	0 ·966	0 ·0
Do. Skin..	,, Cutis......	2	0	2	0	0 ·966	0 ·0
Rheumatic affections..	Rheumatism. acutus et chronicus.....	16	0	16	0	7 ·729	0 ·0
Venereal affections...	Syphilis Primitiva..	12	0				
	Gonorrhœa........	18	0	35	0	16 ·908	0 ·0
	Hernia Humoralis..	5	0				
Other diseases..................		115	0	115	0	55 ·555	0 ·0
	Total....	*409*	7	*409*	7	*197 ·584*	1 *·711*

It may be useful also to notice here, the diseases of the women and children. A table for the same period has been

framed shewing the average strength, and the nature, and amount of disease, with the mortality amongst them.

WOMEN.

CLASSES.	DISEASES.	Aggregate strength 519. Adm	died	Admissions and deaths from each class of disease. Adm	died	Average annual percentage of sick to strength.	Average percentage of deaths to sick.
Fevers....	Febris ephemera....	2	0				
	,, intermitt....	1	0	202	2	38 ·921	0 ·990
	,, continua.....	199	2				
	Cholera............	11	6	11	6	2 ·119	54 ·545
Diseases of the Abdominal viscera...	Diarrhœa	143	1				
	Dysenteria acuta et chronica.........	101	11				
	Colica............	28	0	460	13	88 ·632	2 ·826
	Obstipatio..........	162	0				
	Enteritis..........	2	1				
	Dyspepsia.........	24	0				
	Hepatitis acuta et chronica....	22	1	22	1	4 ·238	4 ·545
Do. Lungs.	Catarrhus..........	51	1				
	Phthisis pulmonalis.	2	1	62	2	11 ·945	3 ·225
	Pneumonia.........	7	0				
	Dyspnœa..........	2	0				
Do. Brain..	Apoplexia.........	1	0				
	Amentia...........	1	1				
	Epilepsia..........	1	0	21	1	4 ·046	4 ·762
	Hysteria...........	4	0				
	Delirium Tremens et Ebrietas.........	14	0				
Do. Eye...	Morbi Oculorum....	27	0	27	0	5 ·202	0 ·0
Do. Skin..	,, Cutis........	16	0	16	0	3 ·082	0 ·0
Dropsy.....	Anasarca..........	1	0	1	0	0 ·192	0 ·0
Rheumatic affections.	Rheumatism acutus et chronicus......	13	0	13	0	5 ·048	0 ·0
	Leucorrhœa.	3	0	3	0	0 ·578	0 ·0
	Other diseases......	227	1	227	1	43 ·738	0 ·440
	Total....	1065	26	1065	26	205 ·202	2 ·441

CHILDREN.

CLASSES.	DISEASES.	Aggregate strength 970. Adm	died	Admissions and deaths from each class of disease. Adm.	died	Average annual percentage of sick to strength.	Average percentage of deaths to sick.
Fevers.	Febris ephemera..	16	0				
	,, intermitt...	4	0	248	11	25 ·567	4 ·435
	,, remittens..	62	9				
	,, continua. ..	166	2				
	Cholera.....	11	9	11	9	1 ·134	81 ·818
Diseases of the Abdominal viscera.	Diarrhœa....	374	23				
	Dysenteria acuta et chronica..... ..	175	15				
	Obstipatio...	66	1	646	65	66 ·597	10 ·061
	Tabes mesenteric..	31	26				
	Hepatitis acuta et chronica.........	5	0	5	0	0 ·515	0 ·0
Do. Lungs & Heart.	Catarrhus..	92	0				
	Pneumonia	16	2				
	Carditis	2	0	120	10	12 ·371	8 ·333
	Dyspnœa....	8	8				
	Pertussis....	2	0				
Do. Brain..	Paralysis....	0	0				
	Tetanus.....	1	0	15	13	1 ·546	86 ·666
	Convulsio..	14	13				
Do. Eye...	Morbi Oculorum..	175	0	175	0	18 ·041	0 ·0
Do. Skin..	,, Cutis..	24	0	24	0	2 ·474	0 ·0
Eruptive fevers....	Varicella...... ..	3	0	106	1	10 ·927	0 ·943
	Rubeola....	103	1				
	Marasmus..	43	0	43	0	4 ·433	0 ·0
Rheumatic affections.	Rheumatism acutus et chronica.	7	0	7	0	0 ·721	0 ·0
Worms ...	Tinea....... ...	74	0	86	0	8 ·866	0 ·0
	Vermes intest......	12	0				
	Other diseases.. ..	297	6	297	6	30 ·618	2 ·020
	Total....	1783	115	1783	115	183 ·814	6 ·449

PRESIDENCY DIVISION.

No. 4—*Return of Sick of the European Troops exhibiting the half Yearly Admissions and Deaths from the principal diseases, and those which have been either Epidemic or Endemic, during the period of ten Years—from* 1829, *to* 1838 *inclusive.*

Years.			Admissions and Deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	,, continued.	,, intermittent.	,, remittent.	Guinea worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small Pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds and Injuries.	Other Complaints.	Average strength each year.	Average percentage of sick to strength.	Annual percentage of death to sick treated.	Annual percentage of deaths to strength.
1829	Admitted....	1st half	1,111	0	0	0	33	0	0	57	121	0	0	77	8	33	0	76	0	0	75	49	0	79	20	0	93	390	2,002	131·468	2·013	2·647
		2d ,,	1,521	2	0	0	26	0	0	51	136	0	0	116	11	2	0	103	2	0	100	64	0	127	21	0	116	644				
	Died........	1st half	24	0	0	0	4	0	0	0	5	0	0	1	1	1	0	4	0	0	0	1	0	0	5	0	0	2				
		2d ,,	29	1	0	0	5	0	0	1	10	0	0	2	0	0	0	3	0	0	0	1	0	1	0	0	1	4				
1830	Admitted....	1st half	1,403	0	0	0	40	0	0	40	83	0	0	52	31	5	0	134	7	0	69	56	0	101	16	0	105	664	2,433	161·282	1·758	2·836
		2d ,,	2,521	1	0	0	53	0	0	152	302	0	49	186	24	13	0	168	2	0	135	70	0	116	22	0	159	1,069				
	Died........	1st half	32	0	0	0	4	0	0	1	2	0	0	0	2	0	0	8	0	0	0	1	0	0	1	0	0	13				
		2d ,,	37	0	0	0	1	0	0	2	13	0	0	1	2	0	0	9	0	0	0	0	0	0	2	0	1	6				
1831	Admitted....	1st half	1,719	2	0	0	7	0	0	72	124	0	54	129	13	14	0	124	5	0	40	77	0	145	20	0	87	606	2,006	188·185	3·205	6·031
		2d ,,	2,056	3	0	0	71	0	0	195	223	0	48	281	22	26	0	116	2	0	75	78	0	132	37	0	122	625				
	Died........	1st half	41	2	0	0	3	0	0	0	7	0	0	3	1	1	0	4	0	0	0	1	0	0	3	0	0	16				
		2d ,,	60	2	0	0	37	0	0	2	14	0	0	2	0	1	0	9	0	0	0	0	0	0	6	0	0	7				
1832	Admitted....	1st half	1,262	0	0	0	0	0	0	36	81	0	28	120	3	77	0	105	4	0	87	53	0	94	31	0	74	469	1,556	174·293	2·396	4·177
		2d ,,	1,450	2	0	0	34	0	0	81	136	0	71	152	15	31	0	83	11	0	63	59	0	101	42	0	90	479				
	Died........	1st half	22	0	0	0	0	0	0	0	5	0	0	0	0	0	0	8	1	0	0	1	0	0	1	0	0	6				
		2d ,,	43	1	0	0	18	0	0	2	3	0	0	2	0	0	0	5	0	0	0	0	0	1	3	0	0	8				
1833	Admitted....	1st half	1,360	3	0	0	20	0	0	64	74	0	28	116	33	20	0	122	8	0	69	80	0	160	34	0	105	424	1,470	205·986	2·344	4·829
		2d ,,	1,668	1	0	0	16	0	0	67	193	0	58	132	7	30	0	96	6	0	74	73	0	254	17	0	121	523				
	Died........	1st half	33	3	0	0	8	0	0	1	2	0	0	0	3	0	0	7	1	0	0	0	0	1	1	0	0	6				
		2d ,,	38	0	0	0	10	0	0	1	8	0	1	3	0	2	0	3	0	0	0	0	0	0	1	0	2	7				
1834	Admitted....	1st half	1,372	2	1	0	0	6	23	87	34	0	57	355	7	5	0	46	4	0	38	52	0	217	51	0	91	296	1,020	246·699	2·282	5·631
		2d ,,	1,169	1	1	0	2	4	36	65	210	0	38	181	15	0	0	42	3	0	27	61	0	241	65	0	22	155				
	Died........	1st half	19	2	1	0	0	0	0	0	4	0	0	1	0	0	0	2	0	0	0	0	0	0	3	0	3	3				
		2d ,,	39	1	1	0	1	0	0	1	21	0	1	1	1	0	0	7	0	0	0	0	0	0	2	0	1	1				
1835	Admitted....	1st half	796	0	0	0	7	1	36	20	71	0	6	99	10	1	0	47	4	0	34	63	0	158	23	0	22	194	894	191·834	2·215	4·250
		2d ,,	919	0	0	0	7	7	54	37	76	0	5	79	3	0	0	60	1	0	25	75	0	170	68	0	45	207				
	Died........	1st half	16	0	0	0	1	0	1	2	3	0	0	1	0	0	0	3	0	0	0	0	0	0	2	0	0	3				
		2d ,,	22	0	0	0	0	0	1	1	5	0	0	0	0	0	0	2	0	0	1	1	0	1	4	0	1	5				
1836	Admitted....	1st half	858	1	0	0	5	17	59	12	86	0	8	70	13	0	0	81	2	0	27	74	0	160	46	0	31	166	950	219·368	1·199	2·631
		2d ,,	1,226	0	0	0	0	10	84	35	185	0	7	69	2	0	0	113	4	0	57	112	0	154	61	0	66	267				
	Died........	1st half	11	1	0	0	0	0	2	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	3	0	0	1				
		2d ,,	14	0	0	0	0	0	0	2	6	0	0	0	0	0	0	3	0	0	0	0	0	1	0	0	0	2				
1837	Admitted....	1st half	1,046	0	2	0	14	7	40	43	129	0	3	52	6	1	0	96	3	0	31	100	0	164	80	0	49	226	686	215·011	3·937	8·465
		2d ,,	859	0	0	0	52	6	31	110	63	0	17	62	2	0	0	50	5	0	16	69	0	111	56	0	35	174				
	Died........	1st half	31	0	0	0	11	0	0	0	4	0	0	0	0	0	0	7	1	0	0	1	0	0	2	0	0	5				
		2d ,,	41	0	0	0	30	0	0	1	4	0	0	0	0	0	0	1	1	0	0	0	0	1	3	0	0	3				
1838	Admitted....	1st half	870	1	2	0	2	18	13	94	32	0	15	146	7	1	0	26	1	0	13	57	0	141	95	0	33	173	754	230·901	1·435	3·315
		2d ,,	871	0	0	0	3	12	12	143	59	0	14	97	6	1	0	19	1	0	20	44	0	158	32	0	42	208				
	Died........	1st half	14	1	0	0	1	0	0	1	3	0	0	0	0	1	0	2	0	0	0	2	0	1	0	0	0	2				
		2d ,,	11	0	0	0	2	0	0	1	3	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	2				

EUROPEANS, PRESIDENCY DIVISION.

Abstract of the preceding Returns, shewing the Total number of Admissions and Deaths, &c. from 1829 *to* 1838.

Aggregate Strength 13,961.	Admissions and Deaths.	Diseases.																									
		Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever Ephemeral.	,, continued.	,, intermittent.	,, remittent.	Guinea worm.	Hepatic diseases.	Insanity.	Leprosy.	Opthalmy.	Rheumatism.	Small Pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds and Injuries.	Other Complaints.
Admitted.... 1st half	11,797	9	6	0	128	49	171	525	835	0	199	1,216	131	157	0	857	38	0	483	661	0	1,419	416	0	690	3,807
Admitted.... 2d ,,	14,260	10	1	0	264	39	217	936	1,583	0	307	1,355	107	103	0	850	37	0	592	705	0	1,564	421	0	818	4,351
Total....	26,057	19	7	0	392	88	388	1,461	2,418	0	506	2,571	238	260	0	1,707	75	0	1,075	1,366	0	2,983	837	0	1,508	8,158
Died......... 1st half	243	9	2	0	32	0	3	5	38	0	0	6	7	3	0	46	3	0	0	7	0	2	21	0	3	56
Died......... 2d ,,	357	5	1	0	104	0	1	14	87	0	2	11	3	3	0	43	1	0	1	3	0	5	22	0	6	45
Total....	600	14	3	0	136	0	4	19	1,253	0	2	17	10	6	0	89	4	0	1	10	0	7	43	0	9	101
Average annual percentage of sick to strength......................	186 ·374	0 ·135	0 ·050	0	2 ·803	0 ·629	2 ·775	10·449	17 ·294	0	3 ·619	18 ·389	1·701	1·859	0	12·209	0·536	0	7 ·689	9·770	0	21 ·336	5 ·986	0	10·786	58 ·350
Do. Do. Deaths to Sick......	2 ·302	73 ·684	42·857	0 ·0	34·693	0 ·0	1 ·030	1·300	5 ·169	0 ·0	0·395	0·661	4·201	2·307	0	5·213	5·333	0	0·093	0·732	0	0·234	5·137	0	0·596	1 ·238
Do. Do. Deaths to Strength..	4 ·291				0 ·972				0 ·894			0 ·121				0·636							0·307			0 ·722

PRESIDENCY DIVISION.

No. 5.—Table exhibiting the number of Admissions and Deaths from each Class of Disease for 5 years.

EUROPEAN TROOPS.

CLASSES.	DISEASES.	From 1834 to 1838. Aggregate strength 4,514. 1st Half. Adm.	1st Half. Died	2d Half. Adm.	2d Half. Died	Admissions and Deaths from each class of Disease. 1st Half. Adm.	1st Half. Died.	2d Half. Adm.	2d Half. Died.	Total admissions from each Class.	Total deaths from each Class.	Average annual percentage of sick to strength.	Average percentage of deaths to sick.
	Febris ephemera	89	0	81	1								
	,, intermitt. quot.	38	0	25	0								
Fevers	,, ,, tertian	6	0	4	1	863	3	599	3	1,462	6	32·388	0·410
	,, remittens	8	1	1	0								
	,, continua	722	2	458	1								
	Cholera	28	13	64	33	28	13	64	33	92	46	2·038	50·0
	Dysenteria acuta	315	13	569	34	352	17	593	39	945	56	20·934	5·925
	,, chronica	37	4	24	5								
	Diarrhœa	256	3	390	6								
	Colica	131	0	98	0								
	Obstipatio	99	1	111	0								
Diseases of the Abdominal viscera	Hæmorrhois	48	0	61	0	563	5	714	6	1,297	11	28·732	0·848
	Enteritis	3	0	4	0								
	Peritonitis	1	1	2	0								
	Gastritis	11	0	12	0								
	Dyspepsia	34	0	36	0								
	Hepatitis acuta	209	8	206	9	296	15	284	14	580	29	12·848	5·0
	,, chronica	87	7	78	5								
	Catarrhus	206	3	188	1								
	Asthma	0	0	4	0								
	Phthisis pulmonalis	10	5	9	6								
	Hæmoptysis	14	0	11	0								
Diseases of the Lungs and Heart.	Pleuritis	0	0	0	0	288	10	285	10	573	20	12·693	3·490
	Pneumonia	40	1	56	3								
	Carditis	11	1	7	0								
	Palpitatio	5	0	4	0								
	Dyspnœa	2	0	6	0								
	Apoplexia	4	4	1	1								
	Epilepsia	11	0	16	0								
	Paralysis	11	0	7	0								
	Cephalalgia	46	2	46	1								
	Phrenitis	0	0	0	0								
Diseases of the Brain	Ictus solis	0	0	0	0	258	10	302	4	560	14	12·405	2·500
	Amentia	7	0	5	0								
	Mania	8	1	8	1								
	Hydrophobia	0	0	0	0								
	Delirium tremens	11	1	18	1								
	Ebrietas	160	2	199	0								
Diseases of the Eye	Morbi Oculorum	143	0	145	1	143	0	145	1	288	1	6·380	0·347
Do. of the Skin	,, Cutis	49	0	39	0	49	0	39	0	88	0	1·949	0·0
	Variola	0	0	0	0								
	Varicella	4	1	1	0								
Eruptive fevers	Rubeola	2	0	1	0	14	1	16	0	30	1	0·664	3·333
	Scarlatina	0	0	0	0								
	Erysipelas	8	0	14	0								
	Anasarca	14	4	20	3								
Dropsies	Ascites	5	0	3	1	19	4	23	4	42	8	0·930	19·047
	Hydrothorax	0	0	0	0								
	Rheumatismus acutus	217	0	251	1								
Rheumatic affections	,, chronicus	129	3	110	1	355	3	373	2	728	5	16·127	0·686
	Neuralgia	0	0	0	0								
	Odontalgia	9	0	12	0								
	Syphilis primitiva	415	1	426	1								
	,, consecutiva	27	0	22	1								
Venereal affections	Gonorrhœa	314	0	309	0	640	1	837	3	1,677	4	37·151	0·238
	Hernia Humoralis	71	0	71	0								
	Strictura urethrae	13	0	9	1								
	Atrophia	6	2	1	1								
	Beriberi	0	0	0	0								
	Elephantiasis	0	0	0	0								
Specific diseases	Lepra	0	0	0	0	26	3	12	1	38	4	0·841	10·526
	Dracunculus	0	0	0	0								
	Ulcus Phagedenicum	0	0	0	0								
	Scrophula	8	1	2	0								
	Scorbutus	12	0	9	0								
Punishment	Punitus	10	0	8	0	10	0	8	0	18	0	0·398	0·0
	Fractura	10	1	12	0								
	Luxatio	0	0	2	0								
	Subluxatio	14	0	18	0								
Wounds and Injuries	Vulnus Sclopitorum	3	0	1	0	223	3	203	2	426	5	9·437	1·173
	,, Incisum	36	0	47	0								
	Contusio	136	2	116	2								
	Ambustio	24	0	7	0								
Including, Phlogosis, Ulcers, &c.	Other diseases	595	3	547	8	595	3	547	8	* 1,142	† 11	25·299	0·963
	Total	4,942	91	5,014	130	4,942	91	5,014	130	9,966	221	221·222	2·213

Average per centage of deaths to strength during these five years has been 4·895.

* Of this number were Phlogosis.... 490 0
Do. do. Ulcers....... 241 1
Do. do. Bubo Simplex. 100 0

† 1 Casualty from Aneurisma. 3 from Splenitis.
1 Fistula in perineo, 1 Apostema lumborum.
1 Cystitis and 2 Cynanche.

Diseases of Children.

It has been observed, that children within the first year after their arrival in this country, whether from England, New South Wales, or the Cape of "Good Hope," but especially from the latter place, become emaciated, suffer from disordered bowels, and fall into a state of marasmus by which many are cut off. The mesenteric glands on dissection are invariably found hypertrophied and the intestines contracted ; the liver also, is in somc cases enlarged.

Tonics, quinine with nourishing food and wine are the most useful remedies in the treatment of this disease, and in some cases the tincture of iodine has had a good effect.

Remarkable case of convulsions.

The following interesting case of convulsions which occurred in a boy aged 7 years, is from the rapidity of its progress worthy of being recorded ; he was admitted March 4th with slight diarrhœa, for which he had a dose of castor oil, and next day his bowels were in a perfectly natural state ; on the morning of the 6th, between 6 and 7 o'clock, he was observed to have some degree of stupor, and shortly afterwards was affected with convulsive movements of the muscles of the limbs, neck and face, the pupils became dilated, and the countenance assumed a livid hue round the mouth and eyes ; the whole body was violently agitated with convulsions especially the left side ; in a short time the right side became entirely paralytic and motionless, but the convulsions continued to affect the other side every 8, or 10 minutes, until death, which took place a little before 9 o'clock. A.M. Cold water was sprinkled over the face, and some stimulants were at first administered ; a vein in the arm, and the temporal arteries were opened at 7 o'clock, but even then he had scarcely any pulse, and appeared to be sinking fast, and very little blood was obtained ; a blister to the nape of the neck, and sinapisms to the feet were applied, without any effect. On dissection, the vessels on the surface of the brain were found to be very turgid, and the right ventricle greatly distended with bloody serum ; the left ventricle was in a natural state, and the

other parts of the brain appeared healthy. The table will shew the generally fatal nature of these diseases.

European children are likewise subject to a discharge from the vagina, on attaining their 7th or 8th year; the fluid is commonly of a muco-purulent appearance, and at times is in such quantity, as to affect the general health, inducing weakness, wasting, and loss of appetite; sometimes pain is felt about the uterine region, with uneasiness and scalding in voiding the urine.

Treatment. Strict attention to cleanliness, with local astringents, tonics, particularly chalybeates, and the frequent use of the cold affusion have proved effectual in removing this complaint.

Native troops stationed at Madras.

The Troops forming the Native part of the Force, are usually three Regiments of infantry, which are hutted, one at Vepery, a second at Perambore, and the third, a veteran battalion, is located in Black-town.

Vepery Lines.

The lines in Vepery are situated immediately to the south of the principal street of the village, on a space of ground 370 yards in length, by 200 in breadth, which is insufficient for the entire regiment, and consequently two companies are placed on the opposite side of the street.

The huts which are in rows are built of mud, and roofed with palmira leaves or straw; the space allotted to each being 12 feet by 6, with an enclosure of the same dimensions; the floors are not raised from the ground, and consist of mud mixed with a little chunam; a mat laid thereon with a coarse cumbley usually forms the sepoy's bed, few having cots, or furniture of any kind.

The lines are kept as clean as circumstances permit, drains run on each side of the houses, but heretofore during the

rainy season, on account of the principal drain not being properly constructed, the channels were apt to become choked; and the neighbouring locality flooded. This evil has however been lately remedied by the drain being efficiently opened.

In the immediate vicinity of the lines there are several tanks of stagnant water, which have been allowed to get into a very offensive state, and are never used; the water of one situated near the parade ground however, is made use of by the sepoys in cooking, and for washing; adjoining is a Roman Catholic burying ground which occasionally emits offensive effluvia; these nuisances under ordinary circumstances do not seem to have any very prejudicial effect on the native constitution, though doubtless they must, in a greater or less degree, favor the action on the system of any epidemic poison; and cholera when it occurs in Madras, accordingly produces considerable havoc in and around these lines; during the rainy season fever of a remittent form is sometimes severe and fatal in this locality, and catarrhs and rheumatism are also rather frequent; but in the hot season it has generally been healthy.

Hospital. The Hospital is situated at the north end of the lines, close upon the main street; it is a substantial building raised two feet from the ground, built of brick and tiled, having a verandah on each side, with four small rooms taken off the ends; it consists of one long ward 120 feet by 16, and is capable of containing 60 patients; the rooms off the verandahs serve for a surgery, dispensary, bath room and dead room. There is a palisade round the building at a distance of 40 feet, and at the two angles on the north side are a cook-room and privy.

Perambore Lines. Perambore, where another native regiment is cantoned, is situated three miles north-west of the Fort, and one mile north of the Vepery barracks. The district under this name comprehends several villages.

The huts of the men are disposed in the same way as at Vepery, in streets, and constructed of similar materials.

The site of the lines is only five feet above the level of the sea, and the ground being uneven, much water lodges in the neighbourhood in the rainy season; some parts are waste, but a considerable portion is under rice cultivation; the waste parts are very offensive, from being places of common resort for the natives.

The soil though sandy on the surface, is clayey at some depth, and numerous brick-kilns and potteries, surround the lines in every direction, the smoke from which at times renders the atmosphere very disagreeable.

Burying and burning grounds for the dead, are also numerous round these lines, the latter as usual being very offensive.

The water here, as elsewhere in Madras, is for the most part brackish, containing salts of soda, magnesia and lime, in combination with muriatic and sulphuric acids, as in sea water, though in comparatively small proportions; good water is however found in a tank, and in a well in the mess compound.

Hospital. The hospital is situated close to one end of the lines, it is built of brick and tiled, and raised two feet from the ground; it consists of one ward 61 feet, by 15½, and cannot accommodate with comfort more than 30 sick; a verandah surrounds the building, and at the distance of 8, or 10 yards, a paling (within which also are the offices) encloses the whole. The accommodation is found to be occasionally insufficient for the sick of the regiment.

From what has now been stated, it will appear that these lines are ineligibly situated, and the distance from the Fort where the men are required to be on duty every second week, is another objection to their position.

The exciting and predisposing causes of acute disease, exist here in a greater degree than in the Vepery lines, and the amount of acute disease in the one, compared with the other, is proportionably greater also, and at this part of the town, as in Vepery, cholera always commits great ravages.

Lines of the Veteran Battalion. The lines of the Native Veteran Battalion are situated about a mile and a half north of the Fort, close to, and within the north wall of Black-town, in the immediate vicinity of the seven wells; the situation though low, is healthy. The place of arms and hospital are also within the walls, close to the lines.

Hospital. The hospital is built of brick and tiled, with a pent roof, it consists of one long ward capable of containing 40 sick, a range of pillars in the centre supports the roof, which extends so as to form verandahs in front and rear, it also projects at the southern extremity where there are two small rooms, one for a dispensary, the other for the assistant apothecary; it is well ventilated by doors and windows, but the latter are unprovided with venetians or blinds.

Although the men of this corps suffer chiefly from chronic complaints, the mortality amongst them is generally considerable. The following table shews the nature and amount of disease, with the mortality which has occurred from 1834, to 1838 inclusive, in the 1st Native Veteran Battalion.

Diseases.	Adm.	Deaths	Average annual strength 1360.
Fevers.	119	* 17	Intermitt. 10 *
Cholera.	6	2	
Diarrhœa.	24	6	
Chest complaints.	39	† 9	Asthma 4 †
Rheumatism.	58	1	
Other diseases.	412	35	
Total....	656	70	

Body Guard lines.

The Governor's Body Guard which consists of two troops of cavalry, may also be considered as forming part of the Garrison ; the Body Guard lines are situated on the west part of the *Island* close to Government bridge, adjoining the Camp Equipage depôt, and are separated from the village of Chintadrapettah by the river Cooum. The men are allowed to live in any of the surrounding villages, no hutting ground being allotted for them.

Barracks and Hospital.

The barracks and hospital, are in the neighbourhood of the horse lines ; the hospital is a small building forming the end of a range of store-rooms, but large enough for the sick of this body of men, who are generally robust, muscular and remarkably healthy, being almost exclusively Mahomedans of respectable families. Except fever acute disease is rare amongst them, and it is generally of an ephemeral character and easily cured; within the last two or three years cases of dracunculus have not been unfrequent, this disease has chiefly occurred in men who had been on duty to Coimbatore (a station in the *southern division,*) but as formerly mentioned, the cause of the disease has been known to exist in the immediate vicinity of their lines for several years past, and it is highly probable that it has been engendered in many of the men in whom it has occurred, in the village of Chintadrapettah.

Duty of the Native troops,

The duty of the native troops, is much the same as that of the European soldier ; they furnish part of the garrison, and other guards ; those guards however in exposed situations, are almost exclusively mounted by the native soldier, as his constitution is comparatively but little affected by the solar heat ; they have in like manner drills and parades to attend ; but their duty in general has not been found to be prejudicial to health.

Diet and mode of living.

Their mode of living when off duty is perfectly similar to that of the native population in general, and the majority being married, have their families with them ; when off duty they resume their native loose

garments, and retain all their native habits and customs. Their food like that of other natives consists of rice, eaten either with condiments, or with curry, the use of beetle nut and tobacco is very general, and some consume the latter to such an extent as to injure their constitutions, and induce a state of marasmus often attended with indigestion, and diarrhœa; others again especially amongst the mussulmans, are addicted to the smoking of narcotic drugs, with the hookah, the abuse of which brings on a debilitated state of the system with nervous tremor, and not unfrequently temporary delirium which sometimes ends in confirmed mania; whilst in all, sooner or later, the habit is followed by emaciation, weakness, indigestion and fatal diarrhœa; but few of the sepoys comparatively are addicted to the use of ardent spirits. It should here be mentioned with regard to food, that in years of scarcity Government ensures an adequate supply of rice to the sepoy by granting a compensation, which brings it within his means to purchase, so that this portion of the native population is at all times placed, beyond the influence of want.

Smoking narcotic drugs.

Remarks on the table of diseases of native troops

A table is appended shewing the nature and amount of the most important diseases, which have occurred during ten years, from 1829, to 1838 inclusive, with the mortality from each. The aggregate strength during that time, has been 60,142, and the total admissions of sick 25,944, or 43 per cent annually on the strength, presenting a striking difference in the ratio of sickness amongst them, as compared with European troops; the amount being less than 1-4th in the natives; the proportion of deaths to the sick treated has been $2\frac{1}{2}$ per cent, nearly the same as amongst the European troops, while that of deaths to the strength has been scarcely a fourth part as high, being little more than one per cent annually. The average per centage it will appear holds pretty uniform throughout the decennial period, except in 1837, and 1838, when the mortality was nearly double; in these two years

the deaths to sick, were 5 per cent, and 2 per cent. on the strength.

The most fatal diseases have been *cholera, diarrhœa, dysentery, intermittent fever, atrophy and rheumatism ;* the percentage of deaths to the admissions of these and other diseases, is exhibited in the table.

It will be observed, that although more than one half of the admissions occurred during the first semi-annual period, the numbers under the heads "cholera," "diarrhœa," "dysentery," and "fever" are much increased during the latter half of each year, owing to the prevalence at that time of the general exciting causes of acute disease, viz. cold and wet.

Cholera. The table shews that cholera has prevailed more or less every year, and that epidemic visitations of this disease happened in the years 1831, 1832, 1833, 1837 and 1838. Of the total number of cases which have occurred viz. 263, with 140 deaths, 108 cases, with 58 deaths, took place in 1833 ; no cause is stated for the great increase in this year, nor perhaps can any be given, for although Europeans suffered, comparatively to a small extent at that time, the general tables shew, that it has prevailed amongst them in other years, when the natives were almost exempt from it. Fully a fifth part of all the deaths amongst the native military, has been produced by cholera, and the great mortality, (53 per cent on the admissions) which has attended it, shews how inefficacious the treatment of this disease still continues to be ; the stimulating plan, aided by the use of calomel and opium, has been that most generally followed.

Diarrhœa. One of the causes of diarrhœa has been alluded to in the preceding remarks, viz. the excessive use of narcotic drugs, another very frequent exciting cause of it, as well also as of dysentery, is exposure to cold and wet in the rainy season, and sleeping on damp floors with but scanty cover-

ing; these diseases are also sometimes occasioned by the use of imperfectly boiled rice, eaten cold in the morning.

The treatment of cases of diarrhœa, occasioned by the long continued abuse of narcotic drugs, and attending a weakly atrophic state of the constitution is always unsatisfactory, and but seldom followed by a thorough, or permanent restoration to health. A course of tonics with gentle alteratives, and careful attention to diet, with the stimulus of wine or spirits, is requisite; relapses are frequent, for men addicted to narcotics seldom remain longer than a month or two at duty, and are at last very generally lost to the service, by death, or by being discharged. When produced by cold, diarrhœa is more simple, and the treatment less complex; but there is a variety of the complaint, which is frequently observed to occur amongst Europeans as well as natives, during the prevalence of epidemic cholera, and also to precede and follow visitations of that disease, which requires much attention, and careful management. A few grains of calomel however, combined with laudanum or opium, and followed by an oily laxative, soon checks its progress; and it has been observed in this form of the disease, that the exhibition of five grains of calomel and five of sulphate of quinine, with one grain of opium has been attended with a happy effect; a gentle dose of rhubarb and magnesia, and the use of bitter tonics for a day or two generally restores the system to a healthy state.* Diarrhœa forms only 1-36th part of all the admissions, but it has caused nearly 1-14th of the mortality.

Dysentery. Dysentery in general is a mild disease as it occurs in the native, compared with this affection in the European, and is of more rare occurrence; the tables shew that little more than one man in two hundred amongst natives has been affected annually, while 17 per cent were

* In similar cases amongst Europeans ten grains of calomel with one of opium, has been generally given, followed in 3 or 4 hours by a laxative, and with very successful results.

attacked amongst Europeans. The mortality compared with the number treated appears to be greater amongst the natives, but the fatal cases have generally ocurred in old and worn out men, or the disease existed for a long time in a chronic form, before admission, in men of dissipated habits, as formerly alluded to. In such cases, obstinate though not extensive ulceration usually exists at the *caput cœcum coli*, and at the termination of the *ilium*, and the patient generally dies exhausted as if from inanition. In the treatment much difficulty is always experienced in regulating the diet, for although allowed that which is suited to the disease, *arrow-root*, *sago*, *wine*, &c. the sepoys invariably persist in taking rice and curry in addition, and often in injurious quantities, by which the complaint becomes aggravated. The best treatment has been found to be mild nutritious diet, counter irritation over both iliac regions, particularly the right, tonic decoctions with quinine, but especially the decoction of colomba with lime water in equal parts, with the addition of a few grains of ipecacuan; and four or five grains of blue pill, with two or three of ipecacuan and one of opium given at bed time, greatly assist the healing process by correcting the diseased secretions; the mineral acids, especially the nitric, and the sulphates of copper and iron, have also been used with good effect, but as the cure is always of slow progress, the foregoing plan of treatment will be found best suited to the disease.

In the other and more ordinary cases of dysentery, the symptoms are seldom so acute as to require venesection, and but rarely the topical abstraction of blood, when however the evacuations are frequent, slimy, bloody and viscid, and attended with heat and pain in the abdomen, and straining and tenesmus at stool, with fever, a few leeches to each lumbar region but particularly to the left, (for in this form of the disease the inflammation is almost exclusively confined to the rectum and sigmoid flexure,) readily subdue the inflammatory action; a dose of oil should then be given for the purpose of clearing out the bowels; after which a few days use of the ipecacuan, in two or three grain doses, four times

daily, conjoined with a light tonic, as infusion of gentian, restores the diseased bowel to a healthy condition; a small quantity of rhubarb may be added to the mixture, on the second or third day with advantage.

Dysentery constitutes only 1-62d part of the admissions, but the deaths from it amount to 1-18th of the whole mortality.

Hepatitis. The almost total absence of hepatic disease amongst natives, has been observed in a former place, and this will not fail to be remarked in these general tables; there being only 49 cases of hepatitis in 25,944 admissions.

Fever. Fever in its various types forms a large proportion of the admissions, not less than 1-4th part, and it has produced nearly 1-7th of all the mortality; the most prevalent forms have been the ephemeral, and the quotidian intermittent. The small mortality attending the first sufficiently shews its mild nature, being only one death in every 243 attacks, in the second the mortality has been $2\frac{1}{3}$ per cent on the number treated. The large amount of cases of the latter type, (1809,) which have occurred, requires some notice, as it has been stated in the observations on the sick of the European part of the force, that intermittent fevers do not prevail to any extensive or virulent degree, in or around Madras.

The native Regiments at the Presidency are usually relieved in from one to two years, and many of them come from parts of the country where both intermittent and remittent fevers, of a bad type, are endemic, especially the Ceded Districts, Mysore, and the Tenasserim Coast; and, as the medical returns of regiments, are furnished to the division in which the corps may happen to be on the last day of the half year to which they refer, although the regiment may not have been more than a few days stationed in it, it frequently

happens not only here, but throughout the whole army, that the diseases and deaths which have occurred during the four or five first months of the half year, in one division, are included in the returns of another several hundred miles distant. To particularize a few such instances, this took place in the Presidency division, on the arrival of the 5th N. I. from the Tenasserim Coast, in 1834; of the 17th from the Ceded Districts, in 1836; and of the 19th from Mysore, in 1838; a very large majority of the cases, and fully 3-4ths of the number of deaths occurred under these circumstances, while again, as has been invariably remarked, the men of these regiments continue for a considerable time, subject to relapses on slight exposure; and in this way attacks of intermittent and remittent fevers, are occasionally seen at the Presidency. But further, detachments are not unfrequently sent to various out-stations on command, and the number of cases of fever which occur in these bodies of men is notoriously great, it not being unusual for the whole of a party to be attacked, and all these cases are included in the returns from the Head Quarters of the regiment. It has also been observed, and the fact seems to be generally acknowledged, that sickly regiments arriving from unhealthy malarious stations, soon regain their health and strength at Madras.

These observations are considered to afford a satisfactory explanation of the frequency of intermittent and remittent fevers, shown in the returns of this division. It is quite true however, that these diseases are at times of local origin, but not frequently, and they are in general mild, seldom fatal, and can very generally be removed without the aid of quinine, by a purgative, one or two doses of calomel at bed time; and the solution of neutral salts, with tartrate of antimony.

In the remittent type, after the inflammatory state of the system and the local complication, which generally affects the head, have been subdued by a few leeches, (for it is seldom so acute as to require V. S.) a smart purgative, and the use of the solution just mentioned, quinine is given to check the ten-

dency which is found to exist in this fever to lapse into the intermittent form; but, should the inflammatory symptoms resist the first treatment, as occasionally happens, there is great danger of effusion taking place in the head, and this is best averted by a repetition of the leeches, and the continuance of the calomel to affect the system, along with counter irritation to the nape of the neck.

It may be instructive, as well as interesting to shew here in a tabular form, the proportion which the admissions, from each of the more important diseases, among European and Native troops bear to the total sick, with the proportion of deaths to the whole mortality, for the purpose of contrasting the result in each of these bodies of men.

Table shewing the number of Admissions and amount of Mortality from the most particular diseases amongst both European and Native Troops at the Presidency during the period of ten years, from 1829 to 1838 inclusive, with the proportion each bears to the total number of Admissions and Deaths: the contrast in these respects in several of the columns of disease between the European and Native sick, is very remarkable.

	Cholera.		Fever.		Dysentery.		Hepatitis.		Diarrhœa.		Thoracic diseases.		Rheumatism.		Syphilis.		Total from these diseases.	
	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.
Europeans.																		
Total Admissions.. 26,057	392	$\frac{1}{67}$	3575	$\frac{1}{7}$	2418	$\frac{1}{11}$	1707	$\frac{1}{15}$	1461	$\frac{1}{18}$	837	$\frac{1}{31}$	1366	$\frac{1}{19}$	2983	$\frac{1}{9}$	14,739	$\frac{4}{7}$
Total Deaths...... 600	136	$\frac{1}{4}$	35	$\frac{1}{17}$	125	$\frac{1}{5}$	89	$\frac{1}{7}$	19	$\frac{1}{31}$	43	$\frac{1}{14}$	10	$\frac{1}{60}$	7	$\frac{1}{85}$	464	$\frac{4}{5}$
Natives.																		
Total Admissions.. 25,944	263	$\frac{1}{98}$	6029	$\frac{1}{4}$	417	$\frac{1}{62}$	49	$\frac{1}{529}$	714	$\frac{1}{36}$	326	$\frac{1}{80}$	2483	$\frac{1}{10}$	1360	$\frac{1}{19}$	11,641	$\frac{1}{2}$
Total Deaths....... 661	143	$\frac{1}{5}$	92	$\frac{1}{7}$	36	$\frac{1}{18}$	6	$\frac{1}{110}$	46	$\frac{1}{14}$	44	$\frac{1}{15}$	32	$\frac{1}{21}$	5	$\frac{1}{132}$	404	$\frac{3}{13}$

The following Table further exhibits the annual percentage of Admissions to the strength; of Deaths to the sick treated; and the percentage of Mortality to the strength; it also exhibits the difference amongst European and Native sick in these respects.

	Cholera.		Fever.		Dysentery.		Hepatitis.		Diarrhœa.		Thoracic diseases.		Rheumatism.		Syphilis.		Total from these diseases.	
European Strength 13,981																		
Percentage of Admissions to strength....	392	2 ·803	3575	25 ·570	2418	17 ·294	1707	12 ·209	1461	10 ·449	837	5 ·986	1366	9 ·770	2983	21 ·336	14,739	105 .421
do. of Deaths to sick treated	136	34 ·693	35	0 ·976	125	5 ·169	89	5 ·213	19	1 ·300	43	5 ·137	10	0 ·732	7	0 ·234	464	3 ·148
do. of Deaths to strength.	136	0 ·972	35	0 ·250	125	0 ·894	89	0 ·636	19	0 ·135	43	0 ·307	10	0 ·071	7	0 ·050	464	3 ·331
Native strength 60,142																		
Percentage of Admissions to strength.....	263	0 ·437	6029	10 ·024	417	0 ·693	49	0 ·081	714	1 ·187	326	0 ·542	2483	4 ·128	1360	2 ·261	11,641	19 ·355
do. of Deaths to sick treated....	143	54 ·372	92	1 ·525	36	8 ·633	6	12 ·245	46	6 ·442	44	13 ·496	32	1 ·288	5	0 ·367	404	3 ·470
do. of Deaths to strength.	143	0 ·221	92	0 ·152	36	0 ·059	6	0 ·009	46	0 ·076	44	0 ·073	32	0 ·053	5	0 ·008	404	0 ·671

A second table No. 7 similar to that for Europeans, and of an equally comprehensive nature, and for the same period, viz. 5 years, has been made out for the Native part of the force; the diseases are similarly classified and the total admissions from each species and class of disease are shown, with the mortality, and the proportions of sick to strength, and of deaths to sick treated.

The most numerous admissions have been from the class of *fevers, diseases of the abdominal viscera, venereal affections* and *diseases of the lungs ;* the greatest mortality has been occasioned by *cholera, diseases* of the *abdomen, fever, chest affections, diseases* of the *brain, dropsies,* and *specific diseases,* in which latter is included *atrophy,* from which nearly all the mortality occurring in this class has been produced; the peculiar state of the system denoted by the term atrophy, has been explained in the observations on that disease, under the head "General Hospital," and the same remarks apply to it equally as it occurs in the Native troops.

The annual average percentage of sick to strength during these five years has been 43½, of deaths to sick 3½, and of deaths to strength 1½.

From this and the corresponding table for Europeans, the following tabular statements have been framed; the first exhibits the amount of admissions and deaths, which have occurred from the more important classes of disease, and the proportion which the attacks and deaths from each, bear to the total admissions and mortality; the difference is also shewn in these points amongst the European and native sick. The second exhibits the percentage of sick to strength, and of mortality to disease; and likewise of deaths to strength in the same classes of disease; and further points out the contrast in these respects, amongst the European and native sick.

Amount of Diseases and Deaths from the several classes of diseases during five years from 1834 to 1838, with the average proportions of Admissions and Deaths.

	Fevers.		Cholera.		Dysenteria.		Abdominal complaints.		Diseases of liver.		Diseases of lungs.		Diseases of brain.		Dropsies.		Rheumatic affections.		Venereal complaints.	
	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.
Europeans.																				
Total Admissions.. 9,986	1462	1/6	92	1/108	945	1/10	1297	1/7	580	1/17	573	1/17	549	1/18	42	1/237	728	1/13	1677	1/6
Total Deaths. 221	6	1/73	46	1/5	56	1/4	11	1/20	29	1/7	20	1/11	14	1/16	8	1/27	5	1/44	4	1/35
Natives.																				
Total Admissions.. 8,816	2241	1/4	95	1/93	195	1/45	587	1/15	20	1/441	218	1/40	169	1/52	60	1/147	841	1/10	450	1/19
Total Deaths..... 320	45	1/7	57	1/5	20	1/51	32	1/9	4	1/75	24	1/13	16	1/19	18	1/17	14	1/21	2	1/150

Table No. 2 shewing the percentage of Admissions to strength and that of Deaths to sick and strength in the same classes of disease.

	Fevers.	Cholera.	Dysenteria.	Abdominal complaints.	Diseases of liver.	Diseases of lungs.	Diseases of brain.	Dropsies.	Rheumatic affections.	Venereal complaints.
Europeans.										
Strength............ 4,514										
Percentage of Sick to strength..........	32 ·388	2 ·038	20 ·934	28 ·732	12 ·848	12 ·693	12 ·405	0 ·930	16 ·127	37 ·151
do. of Deaths to sick.......	0 ·410	50 ·0	5 ·925	0 ·848	5 ·0	3 ·490	2 ·500	19 ·047	0 ·686	0 ·238
do. of Deaths to strength....	0 ·132	1 ·019	1 ·240	0 ·242	0 ·642	0 ·443	0 ·310	0 ·177	0 ·110	0 ·088
Natives.										
Strength.......... 20,253										
Percentage of Sick to strength...........	11 ·065	0 ·469	0 ·962	2 ·898	0 ·098	1 ·076	0 ·834	0 ·296	4 ·152	2 ·221
do. of Deaths to sick	2 ·008	60 ·0	10 ·256	5 ·451	20 ·0	11 ·009	9 ·467	30 ·0	1 ·664	0 ·444
do. of Deaths to strength....	0 ·222	0 ·281	0 ·098	0 ·158	0 ·019	0 ·118	0 ·079	0 ·088	0 ·069	0 ·009

PRESIDENCY DIVISION.

No. 6—*Return of Sick of the Native Troops exhibiting the half Yearly Admissions and Deaths from the principal diseases, and those which have been either Epidemic or Endemic, during the period of ten Years—from* 1829 *to* 1838 *inclusive.*

Years.		Admissions and Deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	„ continued.	„ intermittent.	„ remittent.	Guinea worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small Pox.	Syphilis.	Thoracic diseases.	Ulcer phagedenic.	Wounds and Injuries.	Other Complaints.	Average strength each year.	Average percentage of sick to strength.	Annual percentage of death to sick treated.	Annual percentage of deaths to strength.
1829	Admitted.... 1st half	1,582	1	0	0	2	0	0	38	29	0	0	20	152	17	0	3	4	0	21	241	0	109	15	0	93	837	7,956	43 ·413	1 ·795	0 ·779
	2d „	1,872	0	0	0	7	0	0	34	25	0	0	33	67	20	0	4	2	0	47	231	0	101	12	0	139	1,150				
	Died........ 1st half	21	1	0	0	2	0	0	2	0	0	0	0	2	1	0	0	0	0	0	0	0	1	1	0	1	10				
	2d „	41	0	0	0	5	0	0	3	4	0	0	1	3	1	0	0	0	0	1	0	0	0	0	0	1	22				
1830	Admitted.... 1st half	1,772	0	0	0	2	0	0	18	9	0	0	13	52	4	0	2	13	0	29	199	0	99	12	0	126	1,194	9,546	37 ·911	1 ·740	0 ·659
	2d „	1,847	0	0	0	3	0	0	9	12	0	306	24	41	5	0	4	8	0	44	229	0	96	22	0	145	899				
	Died........ 1st half	37	0	0	0	2	0	0	3	0	0	0	1	0	1	0	1	0	0	0	6	0	0	3	0	2	18				
	2d „	26	0	0	0	1	0	0	0	0	0	1	3	1	1	0	0	0	0	0	3	0	0	4	0	1	11				
1831	Admitted.... 1st half	1,640	0	0	0	2	0	0	30	12	0	182	15	70	9	0	1	16	0	23	161	0	98	11	0	113	897	7,658	44 ·006	1 ·899	0 ·835
	2d „	1,730	1	0	0	15	0	0	39	32	0	352	8	119	30	0	3	6	0	62	142	0	94	10	0	93	724				
	Died........ 1st half	30	0	0	0	1	0	0	1	2	0	3	1	3	0	0	0	1	0	0	2	0	1	1	0	1	13				
	2d „	34	1	0	0	2	0	0	2	3	0	0	2	2	1	0	1	0	0	0	3	0	0	3	0	0	14				
1832	Admitted.... 1st half	1,387	0	0	0	3	0	0	18	27	0	223	21	51	38	0	1	4	0	12	86	0	62	4	0	98	·739	7,025	43 ·174	1 ·912	0 ·825
	2d „	1,646	1	0	0	26	0	0	75	39	0	601	23	78	100	0	0	0	0	50	68	0	58	8	0	78	441				
	Died........ 1st half	24	0	0	0	2	0	0	1	0	0	0	1	1	0	0	0	0	0	1	1	0	0	1	0	2	14				
	2d „	34	1	0	0	10	0	0	3	2	0	1	0	4	0	0	0	0	0	1	1	0	0	3	0	1	7				
1833	Admitted.... 1st half	1,980	0	0	0	67	0	0	52	9	0	484	15	115	10	0	11	4	0	41	188	0	86	6	0	80	812	7,704	47 ·403	3 ·066	1 ·453
	2d „	1,672	1	0	0	41	0	0	80	38	0	473	14	73	12	0	2	4	0	105	110	0	107	9	0	79	524				
	Died........ 1st half	55	0	0	0	36	0	0	2	1	0	2	1	3	1	0	0	0	0	0	0	0	1	1	0	1	6				
	2d „	57	1	0	0	22	0	0	4	4	0	1	2	1	1	0	0	1	0	0	2	0	0	3	0	1	14				
1834	Admitted.... 1st half	1,398	0	40	1	10	182	2	37	21	0	144	2	175	17	2	6	2	0	36	136	4	93	28	3	100	357	4,863	47 ·398	2 ·819	1 ·336
	2d „	907	0	10	0	1	87	0	25	12	0	85	5	183	3	1	2	2	0	23	104	1	35	35	1	86	206				
	Died........ 1st half	46	0	7	0	6	0	0	5	5	0	0	2	3	1	0	3	0	0	1	1	0	0	2	0	3	7				
	2d „	19	0	6	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	3	0	1	3				
1835	Admitted.... 1st half	840	1	6	0	0	132	0	18	9	0	30	2	121	4	5	1	4	0	17	89	0	52	16	0	83	250	3,918	41 ·909	2 ·070	0 ·867
	2d „	802	0	11	1	0	60	0	36	19	0	99	28	128	4	1	5	5	0	16	79	0	38	13	0	62	197				
	Died........ 1st half	16	1	3	0	0	0	0	0	0	0	1	0	2	0	0	1	0	0	1	1	0	0	2	0	0	4				
	2d „	18	0	3	0	0	0	0	2	3	0	0	1	2	0	0	0	1	0	0	2	0	0	2	0	0	2				
1836	Admitted.... 1st half	904	2	5	0	0	200	1	26	11	0	92	15	71	4	22	3	11	0	12	85	1	39	31	0	49	224	3,755	48 ·921	2 ·286	1 ·118
	2d „	933	0	3	0	0	75	2	34	34	0	159	4	144	8	8	1	5	0	60	64	0	43	23	0	73	193				
	Died........ 1st half	24	2	0	0	0	1	0	1	0	0	2	3	2	0	0	0	0	0	0	2	0	1	6	0	0	4				
	2d „	18	0	1	0	0	0	0	4	0	0	0	0	5	1	0	0	0	0	0	0	0	0	2	0	1	4				
1837	Admitted.... 1st half	754	1	22	2	2	123	1	25	25	0	58	11	60	5	51	0	4	0	14	65	0	31	13	0	62	179	3,930	41 ·424	4 ·852	2 ·010
	2d „	874	1	11	0	48	69	0	45	20	0	113	3	90	9	6	0	11	0	39	76	0	49	18	0	75	191				
	Died........ 1st half	28	1	0	1	1	1	0	6	5	0	0	1	4	2	0	0	0	0	0	1	0	0	1	0	1	3				
	2d „	51	1	5	0	29	0	0	0	4	0	0	0	1	2	0	0	3	0	0	0	0	0	1	0	0	5				
1838	Admitted.... 1st half	790	0	15	0	2	87	0	44	10	1	130	4	54	3	25	0	7	0	21	86	2	43	18	0	63	175	3,787	37 ·074	5 ·840	2 ·165
	2d „	614	0	8	0	32	22	0	31	24	0	118	5	46	4	2	0	5	0	28	44	0	27	22	0	48	148				
	Died........ 1st half	26	0	2	0	0	0	0	1	0	0	1	1	4	0	0	0	1	0	1	2	1	1	1	0	0	10				
	2d „	56	0	3	0	21	0	0	4	3	0	1	0	1	0	0	0	1	0	2	5	0	0	4	0	0	11				

NATIVES, PRESIDENCY DIVISION.

Abstract of the preceding Returns, shewing the Total number of Admissions and Deaths, &c. from 1829 to 1838.

Aggregate Strength 60,142.	Admissions and Deaths.	Diseases. Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.
1829 to 1838. Admitted…… 1st half	13,047	5	88	3	90	724	4	306	162	1	1,343
1829 to 1838. Admitted…… 2d „	12,897	4	43	1	173	313	2	408	255	0	2,306
Total….	25,944	9	131	4	263	1,037	6	714	417	1	3,649
Died…. 1st half	307	5	12	1	50	2	0	22	13	0	9
Died…. 2d „	354	4	18	0	90	2	0	24	23	0	6
Total….	661	9	30	1	140	4	0	46	36	0	15
Average annual percentage of the sick on the strength for 10 years…	43 ·137	0 ·014	0 ·217	·006	0 ·437	1 ·724	0 ·009	1 ·187	0 ·693	·001	6 ·067
Average percentage of deaths to the sick treated…………………	2 ·547	100 ·0	22 ·900	25 ·0	53 ·231	0 ·385	0 ·0	6 ·442	8 ·633	0 ·0	0 ·411
Do.* of deaths to strength……	1 ·099		0 ·049		0 ·232			0 ·076	0 ·059		

Aggregate Strength 60,142.	„ continued.	„ intermitt.	„ remittent.	Guinea worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small Pox.	Syphilis.	Thoracic diseases.	Ulcer phagedenic.	Wounds and Injuries.	Other complaints.
1829 to 1838. Admitted…… 1st half	118	921	111	105	28	69	0	226	1,336	7	712	154	3	867	5,664
1829 to 1838. Admitted…… 2d „	147	969	195	18	21	48	0	474	1,147	1	648	172	1	878	4,673
Total….	265	1,890	306	123	49	117	0	700	2,483	8	1,360	326	4	1,745	10,337
Died…. 1st half	11	24	6	0	5	2	0	4	16	1	5	19	0	11	89
Died…. 2d „	9	20	7	0	1	6	0	4	16	0	0	25	0	6	93
Total….	20	44	13	0	6	8	0	8	32	1	5	44	0	17	182
Average annual percentage of the sick on the strength for 10 years…	0 ·440	3 ·142	0 ·508	·204	0 ·081	0·194	0	1·163	4 ·128	0 ·013	2·261	0·542	0·006	2 ·901	17 ·187
Average percentage of deaths to the sick treated…………………	7 ·547	2 ·328	4 ·248	0 .0	12 ·244	6 ·837	0	1·142	1 ·288	12·500	0·367	13·496	0 ·0	0 ·974	1 ·760
Do.* of deaths to strength……	0 ·152	.			0 ·009				0 ·053			0·073			0 302

* Only for principal diseases.

Including all the deaths under fever.

	Strictura urethrae	1	0	4	0										
Specific diseases	Atrophia	88	12	43	18	214	13	73	18	287	31	1	·417	10	·801
	Beriberi	3	1	1	0										
	Elephantiasis	1	0	0	0										
	Lepra	0	0	0	0										
	Draeunculus	105	0	18	0										
	Ulcus Phagedenicum	3	0	1	0										
	Scrophula	11	0	6	0										
	Scorbutus	3	0	4	0										
Punishment	Punitus	21	0	2	0	21	0	2	0	23	0	0	·113	0	0
Wounds and Injuries	Fractura	10	1	8	1	356	4	345	2	701	6	3	·461	0	·855
	Luxatio	7	0	8	0										
	Subluxatio	54	0	35	0										
	Vulnus Sclopitorum	8	1	13	0										
	,, Ineisum	86	1	78	0										
	Contusio	156	1	170	1										
	Ambustio	35	0	33	0										
	Other diseases Including, Phlogosis, Ulcers, &c.	869	10	697	13	869	10	697	13	*1,566	†23	7	·732	1	·468
	Total	4,686	140	4,130	162	4,686	140	4.130	162	8,816	302	43	·529	3	·425

Average annual percentage of death to strength during these five years 1· 491.

* Of this number were	Phlogosis	850	6
Do.	Ulcus	390	3
Do.	Bubo Simplex	127	2
	TOTAL	1367	11

The remaining 12 fatal cases were under the heads Fistula in perineo. Hydrophobia. Hœmatemesis Splenitis. Tetanus. Schirrus. Aneurisma.

CONCLUDING REMARKS.

General remarks on the health of the European residents of Madras.

As respects the health of the European portion of the community in general, not included in the returns of the sick of the Presidency, which are annexed, it may be observed, that notwithstanding the existence of luxuriant, and in many situations uncontrolled vegetation; stagnant and offensive tanks, and lodgements of water; imperfect drainage and its consequences; and the influence of a vertical sun, Madras is perhaps, as healthy a city as can be found within the tropics, or even in some of the more temperate climes, and however inexplicable the immunity from epidemic diseases, which it usually enjoys, may be under these circumstances, such is however known to be the fact; for with the exception of cholera, which occasionally makes its appearance here, as well as in most other large towns throughout India, and of which it may be said "Equo pulsat pede, pauperum tabernas, regumque turres," scarce any other epidemic is met with amongst Europeans; the fevers and dysenteric complaints so general throughout most other parts of the country, being of rare occurrence.

The continued influence of the climate however acting on European constitutions sooner or later (with the exception of some few persons who may be said to have become as it were naturalized by a long residence in India) induces chronic derangement of the hepatic system usually characterized by some of the various forms of dyspepsia, and a torpid state of the bowels, requiring the frequent, and often daily use of aperients, or enemata; and ultimately a change to a more temperate climate for its removal.

European females being but little in the open air, and seldom if ever exposed to the direct influence of the sun, soon lose the bloom of health (or European complexion), but notwithstanding the etiolated appearance which the countenance assumes, they may be said to enjoy a fair share of

health; many indeed having much better health than when in their native country; those of weakly constitutions however, are often great sufferers from the enervating influence of the climate; and to its relaxing effects on the system is doubtless to be ascribed the comparatively trifling degree of bodily suffering, which attends child birth, which here, as in southern Europe, is seldom protracted, or difficult.

Lithographed by B.C.Regel.

Madras Lith: Press

CENTRE DIVISION.

Position, and general description of the Division.

This division of the Army, as its name implies, occupies the most centrical position as regards the Presidency, it extends both to the northward and southward of Madras, lying between the 11th and 17th degrees of North latitude, and 78° 30" and 80° of East longitude; being in its extreme length nearly 400 miles from north to south; and of irregular breadth, varying from about 40 to 100 miles.

Boundaries.

It is bounded on the north by the district of Masulipatam, and part of the country of Hyderabad the river Kistnah forming its natural limit; on the west, by the district of Cuddapah and the Eastern ghauts, part of Mysore and the district of Salem; on the south by Trichinopoly and Tanjore, the Coleroon river being the natural boundary on this side; on the east, the entire coast is washed by the Bay of Bengal, except a small part of the Chingleput district, which is bounded by the Presidency division.

The general appearance of the country towards the coast is low, level and sandy, presenting but little vegetation beyond occasional patches of stunted jungle, with cocoanut and palmira topes. Inland it changes to a gravelly red soil, or to a productive dark loam, which yields abundant crops of rice, cholum, raggy, cotton, &c. The land rises gently to the westward, being interspersed with detached and isolated hills, and in the north west these hills, which are of primitive formation, increase in number and size becoming continuous with the great eastern ghauts, which here separate the districts of Nellore and Cuddapah.

Rivers.

The principal rivers are the Pennar, Paulaur and Pannaur, all of which take their rise in the ranges of hills before mentioned, and flow in an easterly direction emptying themselves into the Bay of Bengal. Besides these rivers the country is intersected by many smaller streams, and tanks of various extent are also numerous,

particularly in the parts of the country most distant from the rivers.

Population.

The great bulk of the population, amounting to 2,759,179, consists of Hindoos of the Malabar caste, a small proportion only being Mahomedans.

The chief occupation of the inhabitants is agriculture, but each of the large towns has the usual proportion of artizans, traders, &c.; and weaving to a considerable extent is carried on in some districts, which will be more particularly noticed hereafter.

The food of the inhabitants does not differ from that of the natives of Madras, already described in the report for the Presidency division.

Schools are kept by Brahmins in all the large and some smaller towns for the education of boys, who are taught to read and write their native language, and also the more simple rules of arithmetic.

The dress of the better class of the natives consists of a turband of cotton cloth, an angreka or jacket of the same material, a cummerbund and a loose cloth worn round the loins, which also serves as a nether garment; the poor and ryots wear simply a scanty piece of cloth round the waist, and another as a turband, but many cannot even afford these imperfect coverings and may be seen going about in a state of almost perfect nudity.

Collectorates & Military Stations.

In this division of the Army are included the five following Collectorates, viz.; Nellore, Guntoor, North and South Arcot and Chingleput. The principal Military stations are situated in Chingleput and North Arcot.

A general table is given at the end of the report, showing the system of dieting and clothing in prisons; the nature of the work on which prisoners are employed; and the hours of labour, in the several jails throughout the division.

NELLORE.

Description, boundaries and extent of the District.

The collectorate of Nellore lies along the coast, situated between the 14th, and 16th degrees of N. latitude, and 79° 10", and 80° 15" of East longitude.

The boundaries to the north and south, are the districts of Guntoor and Arcot respectively; on the east the Bay of Bengal, and on the west, the eastern ghauts which separate it from the Cuddapah district.

Its length from north to south is about one hundred and seventy miles, and its breadth varies from fifty to seventy, presenting an area of nearly 12,000 square miles. The collectorate is divided into 15 Talooks, and 11 Zemindaries, the latter forming part of what is called the Western Polliams.

The aspect and general appearance of the coast, is that of a sandy plain, with large tracts of stunted jungle, interspersed with cocoanut and palmira trees; the country inland becomes more elevated, and hilly, and the soil is in general more productive.

Rivers and Roads.

Several rivers running in an easterly direction towards the sea intersect the country, and the great northern road from Madras to Masulipatam traverses its whole extent, nearly in a straight line, at a short distance from the coast, and consequently along a plain, but little elevated above the level of the sea; the road throughout the greater part of its extent, is artificially raised above the level of the surrounding country, forming a causeway three or four feet high, long tracts of this road in heavy monsoons, are frequently washed away by the water collecting on its western side, notwithstanding the numerous archways left as outlets

for it, these occurrences cause much interruption to traffic and will it is hoped be prevented hereafter by the adoption of inverted arches, or channels of solid masonry, which have been of late substituted for bridges, the arches of which were frequently burst, by the great pressure from below.

The distance of the road from the sea depends on the bending of the coast, at Goodoor it is twenty miles, at Nellore thirteen, at Ramapatam it is close to the beach, and at Ongole, where it bifurcates into the Hyderabad and Masulipatam branches, it is eight miles distant.

The principal rivers are the Pennar, Soornamooky, Munaroo, Poolaroo, Moose and Gomglacummar; a salt-water creek runs several miles inland near Joovuldinnah, on which a ferry boat is kept for the convenience of travellers, but heavy baggage is conveyed by a circuitous route of about three miles.

Pennar River.

The Pennar rises in the Cuddapah hills and runs nearly in a straight line through the talooks of Varegoontapadoo, Ravoor, Sungum, Nellore and Tellanunchy to the sea, giving off numerous channels for the supply of tanks in its passage. The bed of the river at Nellore is sandy, but about ten miles higher up, and from thence to its origin it is stony, and has numerous large and deep hollows in its course, forming natural reservoirs plentifully stored with fish, which on the river coming down in the monsoon, find their way into the tanks and constitute a considerable portion of the food of the inhabitants residing in the neighbourhood. The bed of the river is nearly dry for nine months of the year, but in a few days after the monsoon sets in, it becomes filled from bank to bank, and is then at Nellore five hundred yards and upwards in breadth, and thirty feet deep; much slimy mud is deposited on its banks in the vicinity of Nellore.

Soornamooky River.

The Soornamooky river rises in the Chittoor hills, and crosses the Nellore road at Naidoopet-

tah, it has an irregular course north-east and by east, and likewise gives off several channels to supply tanks ; its bed is sandy and it is completely dry except during the rains, when it contains a considerable body of water.

Wells and Tanks.

The other rivers are comparatively small, and are generally dry except during the rainy season, they give off no water channels, but wells and tanks are constructed along their banks from which the neighbouring lands are irrigated.

Hills.

There are no mountains in the district, and the highest hills do not attain to a greater elevation than four hundred feet.

Climate.

The climate is dry and salubrious, being subject to no sudden transitions of temperature, and is very similar to that of Madras.

Range of Thermometer.

The following is the average mean range of the thermometer throughout the year.

January and February 76½,°	July and August. . . . . . .84,°
March and April. . . . .82,°	September and October. .81½,°
May and June. . . . . . .90,°	November and December 75½.°

Prevailing Winds.

The prevailing winds during the months of January and February, are North Easterly ; in March and April, N.E. and S.E. ; in May and June E. S. E. and S.W ; in July and August E.S.E., and W.N.W. ; in September and October the winds become variable and in November and December it blows steadily from the N.E.

Thus the same winds, it will be observed, prevail as at Madras both places being under the influence of the same monsoons.

Rain, average fall of.

The fall of rain during the year is from 30 to 40 inches, and occurs partly during the south west monsoon in August and September, but chiefly in Oc-

tober, November and December, in the N.E. monsoon. At other periods of the year rain is but of occasional occurrence. The S.W. monsoon is uncertain and irregular in different years.

Portion of land under Cultivation.

About one half of the district is under cultivation, the other parts being either waste, barren or jungly tracts.

Vegetable productions.

The country south of Ongole produces much rice in the vicinity of tanks, but on the higher lands to the westward, from an insufficiency of water dry grains only, such as coolty, cholum, raggy, gingilie seed, the castor oil plant and tobacco, can be grown; the northern parts of the district near Ongole likewise produce cotton, cholum, chinna, tobacco and several kinds of dry grain; * chay-root is cultivated on the coast, and many of the ryots grow indigo in dry soils in various parts of the district.

Medicinal plants, &c.

Various medical drugs are produced in the jungles on the western hills, and exported to Madras and other places, the following is a list of the principal of them.

Gentoo.	*Tamil.*	*English.*
Moostevettooloo.	Yettecotta.	Poison nut or Nux Vomica.
Valhoorooppoo.	Monghill wooppoo.	Tabaseer, or Salt of the Bamboo.
Soogundapala.	Nunnareevair.	Country-Sarsaparilla.
Ralacoy.	Connacoy	Cassia fistula, or Purging Cassia.
Boocheekragudda.	Poocheekra kalangoo.	
Cunnacomareegudda.	Cunnacamare kalangoo.	
Codesapaulavithooloo.	Vepauleearsee.	Oval leaved rose bay.
Andevejeelkarah.	Cææt Siragum.	Purple flaxbane.
Nalatungadoo.	Nala auvara.	Country Senna.
Chittra Moloum.	Chittra Moolum.	Lead wort.
Peddamāne cheeka.	Perumarattoo Putta.	Parn marattoo bark.
Pennaroogudda.	Amkootang.	Root of flexuous branched winter cherry.
Maridoopetta.	Mauvelingaputta.	Smooth cratæva bark
Bavunjee.	Vāluluveyarisie.	Malkungnee seeds.
Tapasæ cheeka.	Tapasemooroongaputta.	White Mooroongatree.
Woodeman noo do.	Wooddiamputta.	Wooddia bark.
Nalavalaga aucoo.	Coottevella.	Coottevella leaves.
Karrivaympākoo.	Caraway pillay.	Bergera.

* Is used for dying cotton cloths—red, orange and purple colours.

It is also said the Sambranee or Benzoin, is to be found in these hills.

Principal Towns. The principal towns in the Collectorate are Nellore and Ongole; Nellore the capital and the seat of the chief civil authorities is situated in latitude 14° 29, and longitude 80°, being about 100 miles north of Madras, and 13 miles inland from the sea—the Pennar river flows past the town.

Nellore. The site of the town is well raised, and the soil is red and lateritious. In former days, as was the case with most towns of any extent in India, it was surrounded by an armed rampart which, as well also as the fort of Nellore, is now in ruins. The town is irregularly built, and in some places rather crowded and confined, but there are some good streets occupied by the better classes, and on the whole for a native town it is tolerably clean and airy. The country around is open; to the west is a very extensive tank filled from the river, and in the vicinity of the town and principally to the eastward are extensive fields of rice ground, watered from the tank and also by canals cut from the river, to the south of the town the country is open hilly and covered with a low thinly scattered brushwood.

Population. The population of Nellore was estimated in 1837 at about 20,000 souls, and that of the talook at 54,240, of whom 27,905 were males, and 26,335 females; and in the year preceding, the returns gave a population of 49,509 namely, males 25,125 and females 24,384.

Town of Ongole. The town of Ongole lies in the northern extremity of the Zillah and is of considerable size, it has a small fort in a state of dilapidation, and the river Moose runs close by it; the scenery in the neighbourhood is somewhat picturesque and varied. The population including also that of the talook of the same name, in 1837

was 36,511 ; 19,022 being males, and 17,489 females ; in the preceding year the population amounted to 31,666 ; males 17,502, females 14,164.

In each talook there are generally one or two considerable villages, with many small hamlets or groups of huts.

Total population of District.

The population of the entire Collectorate for the year 1838, has been stated to be 8,46,572 souls—males 4,48,176, females 3,98,396—they are chiefly Hindoos, the majority of whom are cultivators. Weaving is carried on to a considerable extent, and saltpetre and common salt, both of superior quality, are also manufactured along the coast in considerable quantities.

Mineral products.

Iron and copper ores are procurable in the hilly districts between Nellore and Cuddapah, but have not been found to be very productive, particularly the latter which is not now worked.

Breed of Cattle.

The northern part of the district is celebrated for its superior breed of cattle, which are however found to degenerate very rapidly when removed to other parts of the country unless particularly well fed, and large flocks of sheep are pastured for the Madras markets.

Food.

The ordinary food of the working classes is cholum eaten with, or without raggy ; and those who can afford it use rice. The Yanadies, a wild jungle race of people, are in the habit of using a great variety of roots, fruits and leaves as articles of food, which others are unacquainted with, and during seasons of famine it has been observed that they suffer less than other classes of the poor.

Prevailing diseases.

The diseases met with near the coast are *beriberi, elephantiasis, lepra, rheumatism, intermittent fever* and *dysentery* ;—*cancer* affecting the face, and *diabetes melitus* are not unfrequently seen in the town of Nellore.

Obstinate *intermittent fevers, sloughing ulcers,* and *guinea worm* are of frequent occurrence in the western talooks and zemindaries. Sores depending on a cachectic habit are very common throughout the whole district, and also diseases of the chest, from neglected colds; but tubercular phthisis, and hepatic complaints are very rare. Diarrhœa is a common and very fatal disease, and enlargement of the spleen is also frequent. Cholera and small pox occasionally break out as epidemics, especially amongst the inhabitants of the hills to the west and south-west of Nellore; and intermittent fever becomes also epidemic in many parts of the district when the seasons are irregular.

Worms are frequent and remarkably fatal in particular villages, being generally believed to be produced by the use of the water of tanks when nearly dry in the hot season; the disease has prevailed most in the neighbourhood of tanks depending on the rains for their supply. The number of worms found after death is often surprisingly great, persons suffering from them have been known to be seized with the usual symptoms of fever, quickly assuming a typhoid character, and terminating fatally in two or three days; in such cases the whole alimentary canal has sometimes been found literally filled with *lumbrici.*

Native treatment of disease.

The cases of beriberi are generally treated by the natives with the treeak-farook, rhubarb, iron rust and aloetic purgatives or colocynth. In lepra the oil of the neem tree (Melia Azadirachta) is used as an external application, and the bark is given internally with cloves, colocynth and sheep's bile. The remedies for rheumatism are principally external applications, and the internal use of some mercurials. Fevers are treated by starvation or warm decoctions, and occasionally with mercurial and drastic purgatives. The neem tree bark is also used, and arsenic is not unfrequently given in obstinate cases; in long protracted agues charms are employed as a last resource. Dysenteric cases are treated chiefly with a preparation of opium and pomegranate bark, with spices and cas-

tor oil; fomentations to the abdomen are also commonly used, but the abstraction of blood forms no part of native practice. A combination of iron rust and colocynth, with alkaline earths, such as chunam and burnt bones, are the remedies employed in splenitis. Astringents are usually applied to sloughing ulcers, with poultices and simple dressings. Almost all diseases of the chest when unattended with fever, are treated with iron rust. The natives also frequently resort to change of climate on a long continuance of any disease, and they often on such occasions undertake a pilgrimage to some sacred pagoda or temple; but their birth place or the residence of friends is more frequently selected.

There are no troops of the line either European or Native stationed in this district, the table of diseases hereafter given therefore refers only to the prisoners in the Jail at Nellore.

Jail description of.

The Jail is situated a little to the S. E. of the town, surrounded on two sides by paddy fields, above which it is raised about six feet. In the immediate vicinity are three water courses from the river, which supply the fort ditch, the jail wells, and also serve to irrigate the adjacent lands.

The structure itself, which is calculated to contain upwards of 800 persons, consists of a double range of buildings forming two distinct squares, both contained in an area of 147 yards by 50, being enclosed with a wall 11 feet high; it is provided with sentry boxes on the top, commanding a view of the interior of the squares from which any outbreak, or riot among the prisoners can speedily be discovered; these two buildings are called the old and new jail; the first was built about 34 years ago, but being found to be too small, the new jail, together with the hospital, were added in 1825, both buildings are pent roofed and tiled; the old jail is appropriated for the unconvicted, or prisoners under trial, and the new jail is set apart for convicts. The old building is

the smallest and consists of nine cells varying from thirty-four to fifty feet in length, by ten in width, the doors and windows opening into its area. The new jail is also in the form of a square, the cells are ten in number being loftier, of greater extent and more uniform in their proportions than those of the other; six of them are 57 feet by 17, and the other four 49, by 17 feet. Small circular openings are cut through the back-wall of all the cells in both jails, but are scarcely sufficient to ensure a thorough ventilation. The floors are of clay, raised considerably from the ground, and the drains round the buildings keep them perfectly dry.

Jail Hospital. The hospital is a line of building in the same enclosure, extending across its whole breadth, at the southern part; it is well raised, airy and divided into three wards, the windows being provided with venetian shutters; it is pent roofed and tiled, with a double verandah and calculated to contain 60 patients; a dispensary and surgery are attached to it. The patients in hospital are not provided with cots, but lie on mats on the floor.

Management of Prisoners. The prisoners when committed to jail are severally examined by the medical officer to ascertain whether they have had small pox, or have been vaccinated; and when no unequivocal marks of either disease exist, the person is vaccinated. Such as have clothes are allowed to retain them, and to others they are supplied, each receiving a new cloth and cumbly annually.

The usual system of occasional health inspections is adopted in this jail, being made more or less frequently according as the prisoners may be in a crowded and unhealthy state, or otherwise. The allowance of rice is reduced and condiments increased when considered necessary; altogether the jail discipline has been well regulated for several years past, both by the judicial and medical departments.

JAIL OF NELLORE.

No. 1.—*Table exhibiting the Number of Admissions and Deaths of the Convicted Prisoners, from each Class of Diseases for 10 years.*

Classes.	Diseases. Years.	1829 to 1838. Aggregate Strength 2,694. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions & Deaths from each Class of Diseases. 1st Half. Adm.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each Class.	Total Deaths from each Class.	Average percentage of sick to strength.	Average percentage of deaths to sick.
Fevers......	Febris ephemera	385	1	221	0	1416	17	1208	14	2624	31	97 ·401	1 ·181
	,, intermit: quot	914	11	931	13								
	,, ,, tertian.	2	0	40	0								
	,, remittens....	115	5	16	1								
	Cholera.........	66	35	37	24	66	35	37	24	103	59	3 ·823	57 ·281
Diseases of the Abdominal viscera......	Diarrhœa......	109	5	102	8	267	11	208	24	475	35	17 ·631	7 ·368
	Dysenteria acuta et chronica..	110	5	90	16								
	Obstipatio......	48	1	16	0								
	Hepatitis acuta et chronica...	1	0	0	0	1	0	0	0	1	0	0 ·037	0 ·0
Diseases of the Lungs and Heart.	Asthma.......	8	1	5	1	59	12	17	2	76	14	2 ·821	18 ·421
	Pneumonia.....	47	8	12	1								
	Carditis........	1	1	0	0								
	Phthisis pulmonalis............	3	2	0	0								
Diseases of the Brain.	Apoplexia......	1	1	1	1	3	1	4	1	7	2	0 ·259	28 ·571
	Epilepsia.......	0	0	3	0								
	Mania..........	2	0	0	0								
Eruptive Fevers......	Variola.........	48	10	12	1	175	12	38	2	213	14	7 ·906	6 ·572
	Varicella......	126	2	7	1								
	Erysipelas......	0	0	1	0								
	Rubeola........	1	0	18	0								
Dropsy.....	Anasarca.......	54	8	41	7	54	8	41	7	95	15	3 ·526	15 ·789
Rheumatic affections.	Rheumatism: acut: et chronic:	65	2	75	1	65	2	75	1	140	3	5 ·196	2 ·142
Venereal affections..	Syphilis primitiva...........	3	0	4	2	15	1	8	2	23	3	0 ·853	13 ·043
	Gonorrhœa.....	5	1	2	0								
	Hernia Humoralis..	5	0	2	0								
	Strictura urethrae.........	2	0	0	0								
Specific diseases.....	Atrophia........	0	0	1	1	38	0	11	1	49	1	1 ·818	2 ·040
	Lepra..........	0	0	1	0								
	Dracunculus....	38	0	9	0								
Diseases of the Eye...	Morbi Oculorum...........	8	0	6	0	8	0	6	0	14	0	0 ·519	0 ·0
do. of the Skin.	,, Cutis.....	144	0	56	0	144	0	56	0	200	0	7 ·423	0 ·0
	Other diseases..	906	8	800	6	906	8	800	6	1706	14	63 ·325	0 ·820
	Total....	3217	107	2509	84	3217	107	2509	84	5726	191	212 ·546	3 ·335

JAIL OF NELLORE.

No. 2.—*Table exhibiting the Number of Admissions and Deaths of the Prisoners under Trial, from each Class of Diseases for* 10 *years.*

CLASSES.	DISEASES. / Years.	1829 to 1838. Aggregate Strength 2474. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions & Deaths from each class of Diseases. 1st Half. Adm.	Dd.	2d Half. Ad.	Dd.	Total admissions from each Class.	Total Deaths from each Class.	Average percentage of sick to strength.	Average percentage of deaths to sick.
Fevers......	Febris ephemera	78	3	34	0	226	10	296	4	522	14	21 ·099	2 ·682
	„ intermit.quot.	137	5	252	4								
	,, tertian.......	0	0	4	0								
	,, cemittens.,..	9	0	5	0								
	,, continua......	2	2	1	0								
	Cholera.... ..:.	54	26	26	13	54	26	26	13	80	39	3 ·233	48 ·750
Diseases of the Abdominal viscera.......	Diarrhœa..	46	5	118	43	127	16	237	76	364	92	14 ·713	25 ·274
	Dysenteria acuta et chronica.	62	11	106	33								
	Obstipatio.......	19	0	13	0								
	Hepatitis acuta et chronica...	1	0	0	0	1	0	0	0	1	0	0 ·040	0 ·0
Diseases of the Lungs	Catarrhus......	0	0	2	0	10	3	5	1	15	4	0 ·606	26 ·666
	Asthma........	2	0	2	1								
	Pneumonia.....	7	2	1	0								
	Phthisis pulmon	1	1	0	0								
Diseases of the Brain.	Epilepsia.	0	0	1	0	14	0	20	3	34	3	1 ·374	8 ·823
	Paralysis.......	1	0	0	0								
	Amentia........	0	0	4	1								
	Mania..	13	0	15	2								
Eruptive Fevers....	Variola..	121	30	48	13	465	33	62	13	527	46	21 ·301	8 ·728
	Varicella.	344	3	14	0								
Dropsy.....	Anasarca.......	54	14	80	27	54	14	80	27	134	41	5 ·416	30 ·597
Rheumatic affections.	Rheumat. acutus et chronicus	14	2	9	0	14	2	9	0	23	2	0 ·929	8 ·695
Venereal affections...	Syphilis primitiva..........	0	0	2	0	6	0	5	0	11	0	0 ·444	0 ·0
	Gonorrhœa.....	3	0	0	0								
	Hernia Humoralis..........	3	0	3	0								
Specific diseases......	Atrophia.	1	1	0	0	19	1	20	0	39	1	1 ·576	2 ·564
	Lepra..........	0	0	0	0								
	Dracunculus. ..	18	0	20	0								
Diseases of the Eye...	Morbi Oculorum	5	1	3	0	5	1	3	0	8	1	0 ·323	12 ·500
do. Skin...	,, cutis.....	213	1	172	0	213	1	172	0	385	1	15 ·561	0 ·259
	Other diseases..	79	4	98	9	79	4	98	9	177	13	7 ·154	7 ·344
	Total....	1287	111	1033	146	1287	111	1033	146	2320	257	93 ·775	11 ·077

Diseases of Prisoners.

The preceding tables show the diseases which have occurred in the jail, during ten years ending December 1838; and those to which the inhabitants of the district generally are subject, do not materially differ from them.

Remarks in reference to the foregoing tables of Diseases.

The average annual strength of convicts, see table No. 1, has been 269; and the average annual admissions excluding the class of "other diseases" 402; with a mortality of 19 annually, but excluding cholera it is little more than 13; in 1833 and 34, this average was greatly increased, especially in 1833, when famine prevailed in this, as well as in the neighbouring districts of Chingleput and Guntoor; during these years the admissions were 1,847, and the deaths 82; the increase was occasioned by *fever, cholera, bowel complaints* and *eruptive diseases*. It should be mentioned also that the strength of this class of prisoners, during these two years, only exceeded the usual number by about one fourth.

The average number of unconvicted prisoners or waiting for trial, see table No. 2, for many years, has only been 66; but during the two years alluded to it amounted to 859, and in this period there were no fewer than 1,737 admissions into hospital, with 227 deaths.

The famine was so severely felt in this district, that the poor after much protracted suffering, were frequently induced to commit petty offences to gain admission into the jail, where they were certain of procuring food.

The principal sickness amongst the unconvicted prisoners and the greatest part of the mortality also, have been from the same diseases as in the convicts, and it may be interesting to enter a few remarks respecting them here.

Fever.

Fever of the intermittent type has always been frequent in this jail; it is generally very mild, though occasionally apt to relapse on exposure, and during the wet season it is often complicated with an inflammatory affection of the

lungs requiring active antiphlogistic measures, with the use of mercury and antimonials, previous to employing the sulphate of quinine. This complication has generally been observed to occur amongst prisoners who work within doors, and has been attributed to their incautiously exposing themselves to cold when heated and fatigued; and on dissection the lungs have generally been found hepatized.

The tables likewise shew that idiopathic pneumonia is not of unfrequent occurrence.

Cholera. Cholera visited this district in the years 1832, 33 and 37, it occurred with greatest severity in 1833, when it prevailed more or less over the whole of the Collectorate; in 1832 and 37, it was distinctly traced as spreading from the westward, where it originated amongst the Cuddapah hills.

Dysentery. Dysentery, this disease will be observed to have been frequent, and very fatal; it is seldom absent from this jail, but may be said to have been epidemic in 1833 and 34, amongst both classes of the prisoners, but especially among those waiting for trial. The following were the symptoms of the disease as it occurred at that period; dejections frequent, highly offensive, unattended with griping, straining or pain in the abdomen on pressure; the pulse being small, quick and fluttering; and the tongue covered with a dark fur; great debility and emaciation rapidly supervened.

The frequency of the purging was often alleviated by treatment, the stools assuming a pretty natural appearance before death, which in many instances occurred suddenly on the patient sitting up to take food.

The body after death emitted a peculiar and very offensive odour; and on examination the colon from the vavle downwards, was frequently found in a sphacelated state; in other instances, the mucous coat was ulcerated, either in large patches or small round spots, presenting the appearance of the pustules of small pox;—in but very few cases

were the small intestines at all affected, and but seldom was any other organ diseased; the liver in all cases appeared healthy and the gall bladder contained healthy bile, the lungs were generally pale and their structure normal.

This disease as it usually occurs in the jail is tractable seldom resisting the usual treatment, in the epidemic however under consideration, it was on the contrary very fatal; calomel was injurious, ipecacuanha and opium, with anodyne enemata being the most efficacious mode of treatment, when aided by astringents, tonics and a mild nourishing diet.

Diarrhœa. The cases of diarrhœa occurred chiefly during the above years, and may be said to have been a modification of the same disease; it was attended with an equal, if not a greater ratio of mortality, and the same post mortem appearances were observed as in the dysenteric cases, the exciting causes in both being the same, viz. extreme want and unwholesome food.

At the time that dysentery and diarrhœa were so frequent, the allowance of rice was diminished to half a seer, the quantity of condiments being at the same time increased as a prophylactic measure, with much advantage.

Pneumonia, and Hepatitis. Though pneumonia as already mentioned, has been frequent, but few cases of tubercular phthisis have occurred; and hepatitis has scarcely been observed.

Ulcers. Amongst the class of "other diseases," ulcers form a large number of the admissions, they are generally produced by the friction of the chain or iron fetters, on the legs and feet: they not unfrequently assume a sloughing character in persons of a bad habit of body; and in such cases constitutional as well as local treatment is requisite to induce a healing process. Tonics, with sulphuric or nitric acid, have been found very useful, and bark combined with stimulants, has likewise proved beneficial, with the local application of nitric acid in an undiluted state and hot dressings.

GUNTOOR.

The collectorate of Guntoor including Palnaud is the most northerly part of the Carnatic, and formerly belonged to, or was included in the northern Circars.

Situation, Boundaries and extent.

It lies between the latitudes of 15° 35", and 16° 50" North; and longitude 79° 35", and 81° East, and is of an irregular oblong form; it is bounded on the north by the district of Masulipatam, and part of the Nizam's territories; on the south by the Ongole district, and the bay of Nizampatam; on the west by the Cuddapah district, and Nizam's country; and on the east by a branch of the river Kistna, which separates it from Masulipatam. Its superficial extent, is estimated at 3,500 square miles.

Description of the surrounding Country.

Towards the sea the general appearance of the country is flat and low, but inland it is more elevated and hilly, and in the Palnaud division which forms the west part of the collectorate, the hills chiefly composed of basalt, are covered with jungle. Earthquakes have occurred several times in this part of the Zillah, and a tradition exists amongst the natives, that some of these hills were volcanos in former days, but there is no appearance of a crater on any of them, nor is lava found in the vicinity.

Earthquakes.

Geological Observations.

Beds of white and red lime stone of a close texture and veined, also occur in the district, they are of great depth, and extend in some places many miles in length, giving a gently undulating appearance to the country; from the south bank of the Kistna at Warapilly,

where the lime stone is seen forming as it were a perpendicular wall on its banks, of nearly 40 feet in thickness, it runs in a south-east direction for upwards of 20 miles, being pierced occasionally by hills of basalt; on the opposite side of the river a striking contrast is observed, the formation being partly primary sand stone, but chiefly green stone, horn blende, granite of a fine texture and gneiss.

Rivers. The principal river is the Kistna, which winds round the western side of Palnaud, and along the northern part of the district, forming a natural boundary in these directions; about 23 miles from the coast it divides into two branches, the smaller bends to the south and enters the sea at Gungada-polliam in Guntoor, the other and larger one runs into the Masulipatam district.

The bed of the river is so low as to render it difficult to obtain water by means of channels, and it is only when it is full that water can be directed from its course for the purposes of irrigation; small canals have been opened to supply the tanks in the direction of Rapully near the coast, but the water can only flow into them when the river is very full.

There are several small rivers and streams in this collectorate, the principal of which are the Goondama, Nullamooda, Nagalare and Pillaur—The Goondama divides the district of Guntoor from Ongole; the Nullamooda rises in the Innacoondah hills in Palnaud, and traverses a course of fully one hundred miles before it reaches the sea, filling several tanks in its way; the Nagalare and Pillaur in Palnaud, are two small streams which run northward and fall into the Kistna. Where the Nagalare passes through a range of hills near Carampoondy, it was at one time dammed up and a lake of large extent formed, but the bund is now in a state of decay, and the river has for some time past flowed without obstruction through the opening at Carampoondy, irrigating but a small portion of land.

There are also several smaller streams rising in the hills and higher lands, inconsiderable in themselves, but locally of

importance as supplying tanks near the villages in their course.

Soil. In the Guntoor district, except near the sea where it is sandy, the soil is generally black and loamy; on the banks of the Kistna it is of a rich alluvial nature; and near the villages of Mundarum and Bellumcondah it is impregnated with salt-petre which is largely manufactured at these places. A great proportion of Palnaud, from its being hilly and stony, is uncultivated, these hills as already mentioned consist of basalt rising through beds of lime stone, which in many places near the surface assumes a slaty structure and is used by the natives for roofing their houses; most of the hills, and many of the valleys, are covered with jungle, in other situations however the soil is very productive. Iron ore is found in large quantities, and fine grained marble it is said, might be obtained with but little labour or expense.

Vegetable produce. Betel, tobacco, cotton, cholum, chillies, onions, turmerick, natchney, mukka-cholum, chay root, bojra and various other grains and roots are cultivated. The harvest season may be divided into the three periods in which different kinds of grain are sown; the first that for the bojra crop and mukka-cholum, commences with the setting in of the south west monsoon early in June; this is succeeded by the second or more advanced season, that for cholum, the staple crop of the district; and in the third which commences about the end of September, grain, oil seeds, varega,&c. are sown in the low lands. In the eastern part of the district, a description of paddy called vellavadum, is grown which is chiefly watered by the rains, but it also receives an occasional supply from the Kistna when it overflows its banks, the inundation extending inland about eight miles.

Instruments of Husbandry. The common country plough is still in use, but attempts are making to introduce the cast iron

Plough. plough, with which some of the ryots have been provided.

Gooroo. The Gooroo an instrument for sowing seed, is also in use, it consists of three hollow bamboos fixed to a frame work in a vertical position, converging towards the top, where they are connected with a cup for the reception of the seed, and separated at the lower ends a short distance from each other.

The husbandman as he walks along, deposits the seed in the cup, from which it passes through the bamboos to furrows made by the instrument. The furrows are afterwards closed in by what is called the goontaka which is a piece of iron two feet long, and about one inch in breadth and thickness, attached to the apparatus, by which the seed is completely covered in.

Manure. Manure is considered indispensable in garden lands, and is also requisite for the poorer soils, where dry grain is grown, the dung which is used for this purpose is collected in the villages and from cattle, sheep's dung being the most prized.

Tanks. Tanks are not numerous, nor are there any of great extent in this zillah, with the exception of the tank at Baupetlah which is about eight miles in circumference, and is filled from the river Nullamudda, this tank is very shallow and affords but a limited supply of water. The contrivances for raising water are the pacotta, and the large bucket worked by bullocks; but when the tanks are low the gooda or basket is used, which is worked by manual labour.

Hedges of prickly pear are constructed round garden lands, but fields are only separated from each other by small banks.

Cattle. The cattle of this part of the country are in much repute, and bullocks are exported for sale to various places; they resemble the Nellore breed but have been crossed in some parts of the district with others of an inferior description, and attention is necessary to prevent them

from degenerating; the price of a pair of bullocks of the best breed varies from 70 to 140 Rupees.

Assessment. The assessment of the land-holders varies from 100 to 300, and even 1,000 rupees, but the general average is about 100 though in some cases it is even as low as one rupee.

Manufacture of Cotton Cloth. Cotton cloths are manufactured to a considerable extent, and are exported with the superfluous produce of the land to Madras, Chittoor, Wallajahbad, Masulipatam and to the Nizam's country, partly by land and partly by sea.

Roads. The great northern road passes through Guntoor to Masulipatam, branches likewise run to Cuddapah and Hyderabad; where the roads lead through cotton ground they are heavy, and become almost impassable in the wet season; the by-roads are very indifferent, and can only be traversed by the native bullock carts or by bullocks, the principal carriage for the internal traffic of most parts of the presidency. The rivers in this part of the country are either altogether dried up, or easily fordable in the hot season, and in the monsoon they are crossed by means of boats, there being no bridges; the ferry boats on the Kistna are of a round shape, made of basket work covered with leather, and are capable of conveying from 30 to 40 persons at one time.

Talooks. The collectorate is divided into talooks or estates, each of which has a principal town or village, of the same name, besides several smaller villages and hamlets; the principal towns are Guntoor, Innacondah, Caumulpaud and Nizampatam, in Guntoor; and Trivericottah and Datchapilly, in the Palnaud district.

Town of Guntoor. The town of Guntoor the capital of the collectorate is situated in latitude 16° 12" North, and longitude 80° 20" East, it is twenty-five miles from the sea, and nineteen from the right bank of the Kistna, the country for several miles around is open and flat, the nearest high ground

being a range of hills lying twelve miles to the north-east. The soil in the vicinity is black and produces very luxuriant crops of bengal gram or chenna, cholum and cotton.

The town is divided into what is called the old and new town, it is very irregularly built, and in some places rather crowded particularly the old streets which are chiefly occupied by the lower orders.

Population. The population is estimated at about 20,000 souls; and as might be expected from its distance from hills, jungles or swamps, Guntoor is remarkably healthy.

Innacondah. Innacondah is the principal village or town in the talook of that name, near to which shocks of earthquakes have sometimes been felt; the population of the talook in 1837, was 37,752;—males 19,582, and females 18,170; and the number of houses 14,366, there being less than three persons to each house.

Nizampatam. The talook of Nizampatam is situated on the coast, and a considerable trade is carried on at the town of that name; its population, in 1837 was 24,643;—males 13,168, females 11,475; and the number of houses 7,682 or little more than three persons to each house.

Timmericottah. In Palnaud, the village of Timmericottah lies about 77 miles west by north from the town of Guntoor, the population is about 3,000; in 1837, the returns gave males 1,546, females 1,517. A few miles to the west of this town is a cataract formed during the rainy season by the small river Yedcllapoodah, which is at other times perfectly dry; the water falls from a height of about 60 feet into a basin 120 feet in breath, the sides of which are ornamented with several small hindoo places of worship; this fall is taken advantage of for the purpose of irrigation.

Maherla. Maherla another considerable village is situated 76 miles west of Guntoor, the population in 1837, was 15,137;—males 7,683, females 7,454; number of houses 10,281.

Population of the Collectorate.

The whole population of the collectorate was estimated in the returns for the year 1837, at 2,54,902; being 1,35,582 males, and 1,19,320 females; and the number of houses and huts 92,471, or somewhat less than three persons to each dwelling. In 1831 and 1832, it amounted to 5,12,317 souls, but the famine which occurred in the year following reduced the number, more than one half; during the prevalence of famine, the population is not only reduced by sickness and death, but whole villages become deserted; and many years elapse before it again equals what it previously had been; and up to the present time that of the district of Guntoor is from 2,70,000 to 2,80,000 less than in 1831.

The inhabitants are chiefly hindoos, one-eighteenth part only being mahomedans, and one-seventh part of the present population belong to the brahmin caste.

Climate.

The whole of the collectorate lies within the influence of the south west and north east monsoons, the former commences in May, and occasional rains continue till the month of August, moderating the heat of the land winds which blow occasionally with great strength across this part of the country; a great quantity of rain also falls in the months of September, October and November. The heat at Guntoor is greatest from the middle of March to the middle of June, and from the open nature of the country around the town as already described, the land winds blow with considerable violence, but during the most part of the year the station is comparatively cool. The coast possesses many advantages, and at Nizampatam, from its jutting considerably into the sea, the relaxing effects of the southerly winds are not felt so much as at Madras.

Prevailing diseases.

The diseases met with are much the same as in the Nellore collectorate, but from the returns of sick in the jails, the only data from which an opinion can be formed, there being no military stationed in this district ex-

cept a few native veterans at Guntoor, it would appear to be much more healthy.

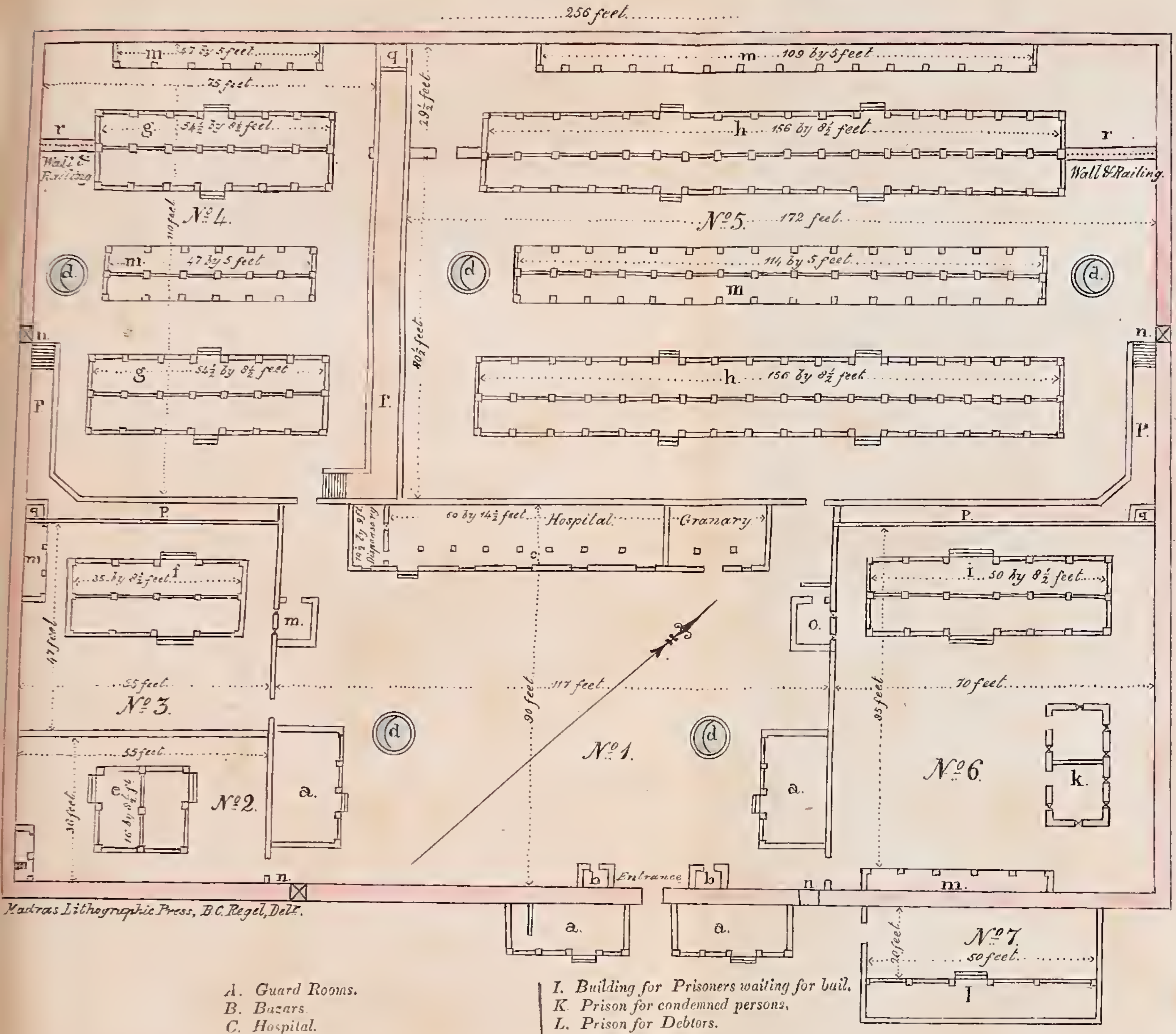
The Zillah court and jail are situated at Guntoor. Previous to 1838 the mud built houses occupied as a jail were small, ill ventilated and altogether of a very faulty construction, yet notwithstanding these circumstances, and the prisoners being often crowded together, the health of the inmates has been equal to that of any other jail in the division, an evident proof of the salubrity of the station.

New Jail. The new jail is situated about 1½ mile from the town on open, dry and slightly rising ground, occupying a space of 85 by 69 yards, and surrounded by a wall fourteen feet high. It consists of several buildings in separate areas, divided from each other by walls eight feet high, for the various classes of prisoners as follows, for females, persons waiting for trial, prisoners sentenced to hard labour the most numerous class, prisoners waiting for bail, for condemned persons and lastly for debtors. The buildings are all built of brick and well ventilated, they are pent roofed and tiled, the floors being of clay and raised one foot from the ground, the whole affording accommodation for 500 prisoners. The out houses and necessaries are conveniently placed, and there is also an ample supply of good water within the walls.

Jail Hospital. The hospital is in the same enclosure and similarly constructed, but floored with chunam, it is also raised one foot from the ground, and consists of one ward 60 feet long which can accommodate from 35 to 40 patients. All these buildings are kept dry and clean by well arranged drains, and being considered a very complete structure, a plan of the whole is annexed.

The following table shews the nature and amount of disease and mortality with the per centage of sick to strength, and of deaths to disease, during ten years ending December 1838.

NEW JAIL and HOSPITAL at GUNTOOR.



Madras Lithographic Press, B.C. Regel, Delt.

A. Guard Rooms.
B. Bazars.
C. Hospital.
D. Wells.
E. Prison for Females.
F. Building for Prisoners waiting for trial.
G. Buildings for Prisoners Sentenced.
H. Buildings for Prisoners Sentenced to hard Labour.
I. Building for Prisoners waiting for bail.
K. Prison for condemned persons.
L. Prison for Debtors.
M. Cooking sheds.
N. Outlets for the drain.
O. Necessary.
P. Places for the Sentries to walk.
Q. Sentry Boxes.
R. Wall and Railings.

Situation of Jailor's House.

Assist. Jailor's House.

JAIL OF GUNTOOR.

No. 3.—*Table exhibiting the Number of Admissions and Deaths of the Convicted Prisoners, from each Class of Diseases for* 10 *years.*

CLASSES.	DISEASES. / Years	1829 to 1838. Aggregate strength 3137. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd	Admissions and Deaths from each Class of Diseases. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each Class.	Total Deaths from each Class.	Average per centage of sick to strength.	Average percentage of deaths to sick.
Fevers......	Febris ephemera	6	0	6	0	88	8	216	15	304	23	8 ·844	7 ·565
	„ intermitt quot........	62	5	193	13								
	„ „ tertiana	1	1	5	0								
	„ remittens...	19	2	12	2								
	Cholera.........	83	34	23	10	83	34	23	10	106	44	3 ·084	41 ·509
Diseases of the Abdominal viscera.......	Diarrhœa.......	44	15	97	41	61	25	106	44	167	69	4 ·858	41 ·317
	Dysenteria acuta et chronica	15	9	7	3								
	Obstipatio......	2	1	2	0								
Diseases of the Lungs	Catarrhus......	23	7	7	4	30	13	12	6	42	19	1 ·222	45 ·238
	Asthma..	1	1	0	0								
	Pneumonia.....	2	2	3	1								
	Hœmoptysis....	1	0	0	0								
	Phthisis pulmonalis.........	2	2	2	1								
	Dyspnœa.......	0	1	0	0								
do. of the Brain...	Epilepsia.......	0	0	1	0	3	0	3	0	6	0	0 ·174	0 · 0
	Mania..........	1	0	0	0								
	Paralysis.... ..	2	0	2	0								
Eruptive fevers......	Variola.........	89	12	43	2	94	12	45	2	139	14	4 ·044	10 ·071
	Varicella.......	5	0	2	0								
Dropsy.... ..	Anasarca.......	53	18	84	46	53	18	84	46	137	64	3 ·986	46 ·715
Rheumatic affections.	Rheumatismus acutus et chronicus..	58	2	65	10	58	2	65	10	123	12	3 ·578	9 ·756
Venereal affections ..	Syphilis primitiva..........	6	1	5	0	8	1	7	0	15	1	0 ·436	6 ·666
	Gonorrhœa.....	2	0	1	0								
	Hernia Humoralis............ ..	0	0	1	0								
Specific diseases.....	Atrophia........	1	1	0	0	69	2	44	3	113	5	3 ·287	4 ·424
	Lepra..........	2	0	1	0								
	Beriberi........	0	0	1	1								
	Dracunculus....	64	1	38	1								
	Scrophula......	1	0	3	1								
	Scorbutus......	1	0	1	0								
Diseases of the eye...	Morbi Oculorum	9	0	10	0	9	0	10	0	19	0	0 ·552	0 · 0
do. of the skin.....	„ Cutis......	43	0	25	0	43	0	25	0	68	0	1 ·978	0 · 0
	Other diseases..	230	3	274	6	230	3	274	6	504	9	14 ·663	1 ·785
	Total......	829	118	914	142	829	118	914	142	1743	260	50 ·712	14 ·916

JAIL OF GUNTOOR.

No. 4.—*Table exhibiting the Number of Admissions and Deaths of the Prisoners under Trial from each Class of Diseases for 10 years.*

CLASSES.	DISEASES. Years	1829 to 1838. Aggregate strength 1819				Admissions and Deaths from each class of Diseases.				Total admissions from each class.	Total deaths from each class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
		1st Half.		2d Half.		1st Half.		2d Half.					
		Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.				
Fevers,.....	Febris ephemera	4	0	2	0								
	,, intermittquot..........	23	6	108	11	42	12	120	12	162	24	8 ·906	14 ·814
	,, tertiana..	4	2	3	0								
	,, remittens	10	4	4	1								
	,, continua..	1	0	3	0								
	Cholera........	120	50	61	22	120	50	61	22	181	72	9 ·950	39 ·779
Diseases of the Abdominal viscera..,....	Diarrhœa.......	69	27	163	102								
	Dysenteria acuta et chronica..	13	6	14	8	85	33	177	110	262	143	14 ·403	54 ·580
	Obstipatio.......	3	0	0	0								
	Hepatitis acuta et chronica....	0	0	1	1	0	0	1	1	1	1	0 ·054	100 ·0
Diseases of the Lungs	Catarrhus......	12	5	16	9								
	Asthma........	2	1	1	0								
	Phthisis pulmon	0	0	1	0	16	7	19	9	35	16	1 ·924	45 ·714
	Pneumonia.....	1	1	0	0								
	Hœmoptysis....	0	0	1	0								
	Dyspnœa.......	1	0	0	0								
Diseases of the Brain.	Paralysis........	1	0	4	0								
	Amentia.......	1	1	0	0	7	1	4	0	11	1	0 ·604	9 ·090
	Mania..,........	5	0	0	0								
Eruptive Fevers......	Variola....	129	23	120	16	130	23	122	16	252	39	13 ·853	15 ·476
	Varicella..	1	0	2	0								
Dropsy......	Anasarca.........	91	48	139	73	91	48	139	73	230	121	12 ·644	52 ·608
Rheumatic affections..	Rheumat. acutus et chronicus...	50	13	54	17	50	13	54	17	104	30	5 ·717	28 ·846
Venereal affections.	Syphilis primitiva	1	0	2	0	3	0	3	0	6	0	0 ·329	0 ·0
	Gonorrhœa......	2	0	1	0								
Specific diseases.....	Atrophia........	0	0	0	0								
	Beriberi........	0	0	0	0								
	Lepra..........	0	0	6	5	31	1	30	6	61	7	3 ·353	11 ·475
	Dracunculus,...	20	0	19	0								
	Scorbutus	11	1	5	1								
Diseases of the Eye..	Morbi Oculorum	1	0	1	0	1	0	1	0	2	0	0 ·109	0 ·0
do. Skin..	,, cutis....	31	0	16	0	31	0	16	0	47	0	2 ·583	0 ·0
	Other diseases.	63	6	58	10	63	6	58	10	121	16	6 ·652	13 ·223
	Total....	670	191	805	276	670	191	805	276	1475	470	81 ·088	31 ·864

General results of the preceding tables of disease. In this, as in the other jails in the division, a great increase of prisoners of sickness and of deaths, took place in 1833 and 1834, the famine having been very severely felt throughout the collectorate; in every street men, women and children were met with perishing from want, and the cattle nearly all died, and many persons committed crimes to gain admission into the jail, in order to be fed. During these years the average number of prisoners waiting for trial, was 1,573, the usual number not exceeding 35; and 1,199 admissions into hospital, with 429 deaths took place, being nearly four-fifths of all the admissions, and fully ten-elevenths, of all the mortality which has occurred amongst this class of prisoners during the ten years; the sickness it may also be remarked was confined almost exclusively to the years 1832, 33, 34 and 1835.

The number of convicted prisoners during these years was not increased in a similar ratio, the average being 520, about double the usual number; almost one half however of all the sickness occurred in this period, and nearly three-fourths of all the mortality, there being 832 out of the total admissions 1,743, and 197 out of 260, the total number of deaths.

Excluding these two years the annual average of sick to strength, during the remaining eight, is reduced from 50½ to 42½, and of deaths to sick, from 15 to 7 per cent; the annual number of admissions during these eight years averaging 114, and the annual deaths nearly 8.

Diseases of Prisoners. The principal diseases met with in the jail are *intermittent* and *remittent fever*, the latter being occasionally severe and sometimes fatal, *diarrhœa* which is also occasionally fatal, especially in old subjects, *cholera*, *catarrh*, *phthisis* and *rheumatism*, *dracunculus* is also not unfrequent, and lastly *ulcers*, which form the greatest number of admissions in ordinary years.

The diseases which occurred in 1833 and 1834, were similar to those met with in the other jails, and described in the account of Nellore.

Fever. The fevers were generally of the intermittent type, which in the cases that terminated fatally rapidly assumed the remittent form, with determination to the head, death being preceded by coma.

Cholera. The cases of cholera were of the asphyxial character, this disease visited Guntoor in an epidemic form in 1833 and 1834 ; and it appeared also in 1832 and 1837, but not as an epidemic; the treatment consisted generally in the exhibition of an emetic in the first instance, followed with a dose of ten grains of calomel, which latter was repeated every half hour; and draughts composed of camphor grs. v., spirits of ammonia min. xx., tincture of lytta min. xv., and colocynth grs. x; were given every ten minutes or half an hour, according to circumstances, till the stools changed or the pulse rose; nitric acid blisters were applied to the nape of the neck and epigastrium; enemata of croton oil, with stimulating frictions and the application of hot sand were also resorted to, and tonics given during convalescence; under this mode of treatment the mortality it will be observed, was 41 per cent.

Diarrhœa. The fatal cases of diarrhœa for the most part occurred in old worn out men, and were attended in most instances, with œdema of the lower extremities and body generally; this disease was with difficulty, even in the cases which recovered, subdued by the most powerful astringents and tonics, the remedies which appeared to have been most relied on. Ulceration was found to exist in the colon, of the same character as that met with in the Nellore jail.

Anasarca. The cases of anasarca generally terminated by effusion into the chest and pericardium, producing much dyspnœa with irregularity of the heart's action; and diarrhœa, coming on at a late period of the disease, carried off many of the patients.

Small Pox. Small pox likewise prevailed during the famine, and but for the exertions of the medical officer, must have

caused great ravages; the means adopted by him to prevent its spreading were as follows; the patients were kept as distinct as the prisons allowed, from the other inmates, the apartments were white-washed, and frequently fumigated with the nitrous acid vapour, and the prisoners who bore no satisfactory marks of either small pox or cow pox, were immediately vaccinated. Vaccination was had recourse to in a great many cases after the eruptive fever appeared, and in others when it first showed itself, but in no single instance, in such cases, had it the slightest effect in modifying the course of the disease. Death occurred during the eruptive febrile stage in many of the cases of the confluent form, which assumed a typhoid character at an early period, and the patients died comatose, the eruption not being advanced beyond the papular stage; others again when the eruption became maturated sunk under the effects of colliquative diarrhœa;—363 cases of modified and natural small pox occurred at this time with 50 deaths, the average strength as already stated being 1,573. Nothing particular was observed in the mode of treatment employed.

NORTHERN DIVISION OF ARCOT.

Situation and extent.

The extensive tract of country included under this name, lies between the Nellore collectorate on the north, that of Chingleput on the east, Cuddapah on the west, and the southern division of Arcot on the south; it is of an irregular shape, its greatest extent from north to south being about 90 miles, and its average breadth between Chingleput and Cuddapah, from 40 to 50 miles; extending from about 12° 3", to 14° of North latitude; and from 70° 36", to 80° East longitude, and presents a surface of 5,571 square miles.

Aspect of the Country.

The aspect of the country towards the east and south, is level and low, but towards the west and north, it is rugged and hilly; and becomes even mountainous. The soil on the plains is for the most part sandy mixed with loam, and gravel; it is generally under cultivation, is very productive of rice, and other grains, and abounds with gardens, there being but little jungle; the soil in the valleys in the hilly part of the country which is also very productive is sandy and gravelly, and in some places clayey; the hills are composed principally of granite and sienite, ores of copper are found amongst the hills in Calastry, and iron ore is also abundant; the hills are almost all bare, and appear rugged and barren, the skirts of some of them however are covered with a stunted jungle. The direction of the principal hills is north and south, others run east and west, while others again in the lower parts of the country, are nearly detached or altogether isolated

Rivers.

The principal river is the Palar or milky river, which as before stated rises in Mysore, and flows eastward through this and the Chingleput collectorate nearly in a

straight line, passing close to the military stations of Vellore, Arcot and Wallajahbad, and to the town of Chingleput, running into the sea at Sadras. There are many smaller rivers in this district, as the "Poney" and "Soornamucky," &c. which are more or less taken advantage of for the purposes of irrigation, and for supplying tanks in their vicinity. There are several very large tanks as the Caverypauk which is about eight miles long and three broad, and numerous smaller ones.

Pulicat Lake. The large salt water lake, called the Pulicat lake, may be said to belong to this collectorate as it is situated at its north-east extremity, and forms a part of the boundary in that direction to the extent of 37 miles, which is about the length of the lake; it varies in breadth from two or three, to eleven miles; the communications with the sea are extremely narrow, but quite sufficient to allow the tide free entrance, so that the water is constantly changed; there are several large islands on the lake, on one of which the town of Pulicat is situated. A canal has been constructed from this lake to the northern extremity of Madras distant about 14 miles, which greatly facilitates the importation of charcoal, firewood, vegetables and other articles of daily consumption, to the Presidency markets.

Produce. Grains of every description are produced in great abundance, and cotton is grown extensively both for exportation and for the manufacture of country cloth, and besides the usual produce sent to the Madras market, a small trade is carried on to the eastward, from this collectorate.

Roads. The country is traversed by several tolerably good roads as the military roads to Bangalore, Trichinopoly and Cuddapah, from which there are branches to Cuddalore, Coimbatore, &c; the cross roads which are numerous, and in many places temporary, are only passable by bullocks.

Talooks. This collectorate like the preceding one is sub-

divided into districts or divisions, named talooks ; they are 26 in number, each of which contains a large village or town, generally of the same name, besides many smaller villages and hamlets ; the talooks vary much in size, extent and population, the latter ranging from 9000, to 72,000.

Population. A Census does not appear to have been taken of the entire collectorate, but of that portion for which it has been made, and which forms nearly two-thirds of the whole, the amount of population in 1837, was 5,19,987 ;—males 2,65,213, and females 2,54,774 ; and the number of houses amounted to 1,05,350.

The inhabitants are for the most part occupied in the cultivation of the ground, a few are employed in making cloth, manufacturing oil, &c. ; their mode of living and diet, does not vary from that of the other parts of this division.

The principal talooks with their towns are, Arcot, Vellore, Arnee Chittoor, Caverypauk, Trivullum Satghur and Trivattor ; the population in each of which was computed to be as follows :—

	Males.	*Females.*	*Total.*	*Houses.*
Arcot	26,462	27,012	53,474	10,042
Vellore	36,311	35,754	72,065	14,882
Arnee	not	known	......	......
Chittoor	21,969	20,951	41,920	7,925
Caverypauk	24,955	23,864	48,819	9,278
Trivullum	16,867	15,758	32,625	6,349
Satghur	22,220	20,578	42,798	8,608
Trivattor	20,934	20,102	41,036	8,382

Climate: The climate does not differ materially from that of the other collectorates in this division, and where any peculiarity obtains, it will be noticed in the description of the civil and military stations of the district.

ARCOT.

This town formerly the Mahomedan capital of the Carnatic, was occupied first by that people in 1716, the mountain fortress of Gingee, near Pondicherry, their original stronghold having been found so extremely unhealthy as to oblige them to canton on the plains of Arcot.

Cantonment. The Cantonment as it now exists, and also the

town are of modern date, the inhabitants however are still chiefly Mahomedans. Until the year 1829 it formed the head quarters of the Centre Division of the army, but is at present exclusively a Cavalry cantonment. It lies about 63 miles west south-west from Madras, in latitude 12° 52′ North, and longitude 79° 29′ East; it is situated upon high ground sloping towards the left bank of the Palar river which flows at the distance of 900 yards in its front.

The country around is open but irregular, and with the exception of two or three inconsiderable bare hills consisting of granite, there is no high land near; the nearest hills of any importance, being an extensive range to the south west of the cantonment, distant seven miles; they also consist of granite in a decaying state, appearing rugged and rocky, and for the most part bare.

The soil in the cantonment and surrounding neighbourhood consists chiefly of a barren whitish gravel, except on the south-east and south-west sides where there are tracts of low paddy ground of some extent, running parallel to the river, and irrigated by artificial channels from it; there are also several small patches of rice ground in the vicinity, watered from tanks. Besides these there is but little vegetation for several miles round with the exception of an extensive strip which commences about half a mile to the south-west, and runs one mile along the bank of the river, having a breadth of about 400 yards, this is thickly planted with mango, tamarind, date, guava and a variety of other trees; and is known by the name of the "nine lac" garden, from the number of trees it is said to contain; there is no jungle within many miles.

River Palar. The bed of the river in this neighbourhood is sandy, and its waters do not deposit any slime or mud, it is fully 500 yards in breadth in the monsoon when full, whilst during the greater part of the year, it is merely a small stream and its bed is sometimes altogether dry.

The water is good and in the dry season when it becomes scarce in wells and tanks, which sometimes happens, pits are dug in the bed of the river from which a supply is always procurable.

Cantonment. There is accommodation in the cantonment for three regiments, one of European and two of Native cavalry. The lines for the horses are placed parallel to each other, and considerably in advance of their centre, is an extensive barrack for Europeans, built of brick and chunam, with a tiled pent roof, the floors are laid with brick and the whole is surrounded by a wall. Immediately in front of the lines of each regiment is a place of arms, a guard-room and a range of stables for sick horses; and about 400 yards to the rear are the hospitals three in number, which are commodious, advantageously situated, well ventilated and built of the best materials; behind these again are the granaries, solitary cells and an extensive well-built lock*-hospital surrounded by a wall. The public buildings in this cantonment are all well constructed, large and airy, particularly the hospitals which it may be remarked are superior to any native hospitals in this presidency. A plan of one of them is annexed.

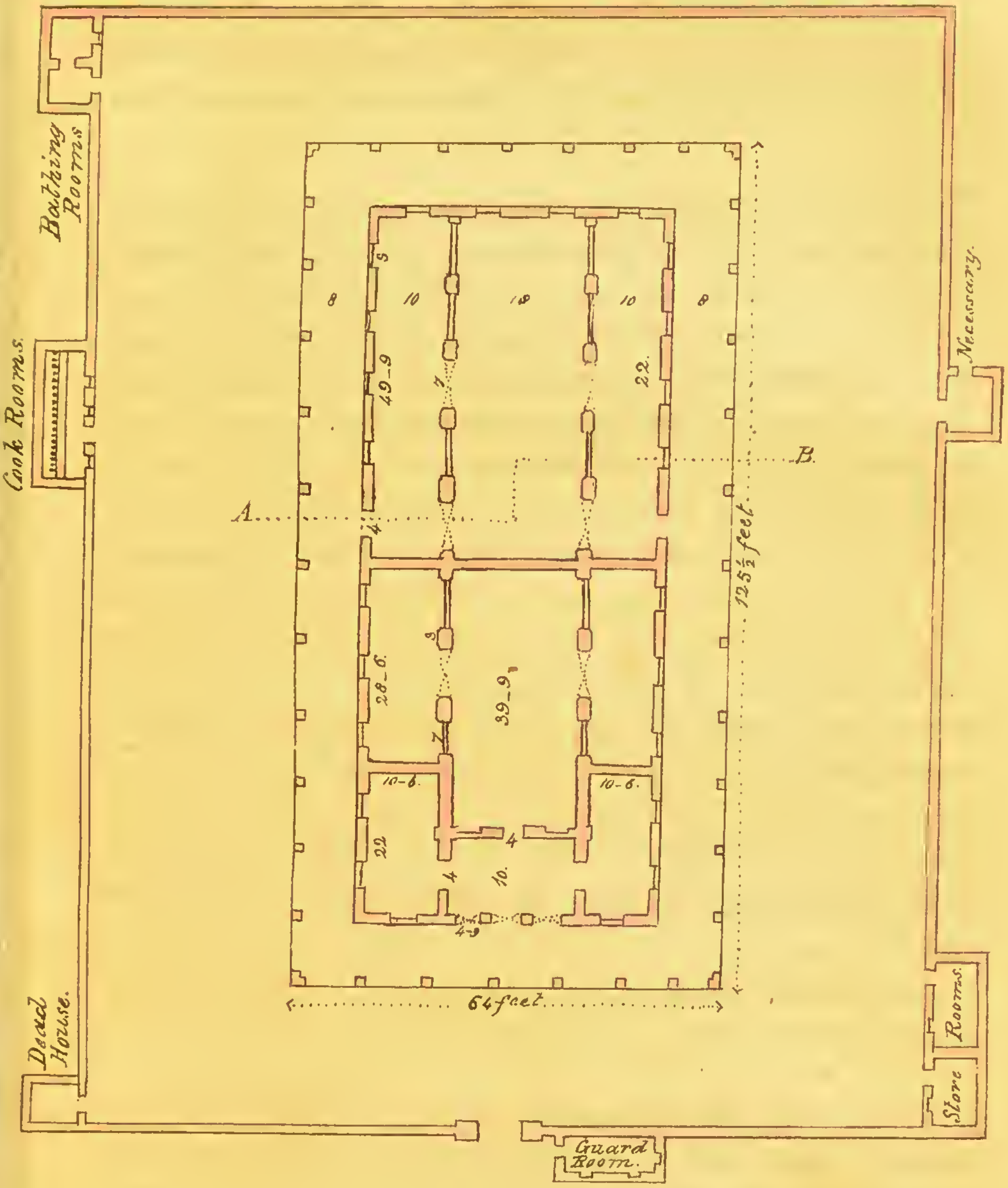
In the rear of the centre lines stands a neat protestant chapel.

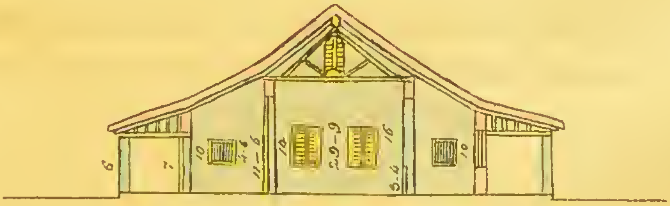
Some of the officers houses are placed in the rear and others in front of the lines, the former which are on high open ground are airy and dry, but the latter being comparatively low and somewhat confined by trees, are considered less healthy.

Pettah. The pettah or village, which is situated between the cantonment and the river, is in some parts low and confined, but is kept tolerably clean; in it is the principal bazaar, and on its western side are the huts or the lines of the sepoys of one of the cavalry corps, those of the other native regiment, being placed on the right of the canton-

* Not now in use.

NATIVE HOSPITAL at ARCOT.





Section through A. B.

Lithd. by B. C. Regel

Madras Lith: Press.

ment; the lines are constructed in streets, corresponding with the number of troops or companies. The hindoos have a street appropriated to themselves, so also have the trumpeters and farriers, who are all indo-britons.

Healthiness of the Station. Arcot is generally reckoned to be a healthy station, there is nothing apparently objectionable in its locality, except it be the low site of the western part of the pettah, and a portion of the lines in that direction; some of the officers bungalows in front of the cantonment, are also low and somewhat confined by having too many trees round them, as already mentioned, and it is worthy remarking, that the people residing in these parts of the cantonment have always suffered most from cholera, when it has visited the station.

It is found as might be expected from the preceding description, that febrile diseases met with here, are not of a malarious origin or nature, being generally produced by cold or vicissitudes of climate, and although frequently assuming the intermittent or remittent types, they are generally cured without the aid of quinine. The native cavalry who are chiefly composed of Mahomedans of the better classes are generally strong, muscular and well made men, and febrile diseases amongst them are observed to be of a more acute character, than in other native troops, being likewise more frequently complicated with inflammatory local affections. At this station the head or chest are the parts chiefly implicated, in few cases however, have the local complications been of a severe or fatal nature.

During the last ten years not more than two native regiments have been stationed at Arcot at any one time, and frequently there has been only one; and no European cavalry have been quartered at the station for a number of years past.

The following table will shew the nature of the prevailing diseases. The mortality is very trifling, and excluding cholera, which disease visited the place in 1833 and 37, it is very small indeed.

ARCOT.

No. 5.—*Table exhibiting the Number of Admissions and Deaths from principal Diseases for 10 years.*

CLASSES	DISEASES.	From 1829 to 1838. Aggregate strength 7,965. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions and Deaths from each Class of disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each Class.	Total deaths from each class.	Average per centage of sick to Strength.	Average per centage of deaths to sick.
Fevers...	Febris ephemera	54	0	107	0								
	,, intermittquot..........	185	1	391	2	511	4	714	4	1225	8	15 ·379	0 ·653
	,, tertiana...	117	0	9	0								
	,, remittens..	149	2	207	2								
	,, continua..	6	1	0	0								
	Cholera.........	56	28	35	10	56	28	35	10	91	38	1 ·142	41 ·758
Diseases of the Abdominal viscera......	Diarrhœa.......	76	0	61	2								
	Dysenteria acuta et chronica.	30	1	40	0	106	1	101	2	207	3	2 ·598	1 ·449
	Hepatitis acuta et chronica...	1	0	3	0	1	0	3	0	4	0	0 ·050	0 ·0
Do. of the Lungs......	Catarrhus......	20	0	22	1								
	Asthma.........	3	0	7	2								
	Phthisis pulmon	1	0	3	1	30	2	38	5	68	7	0 ·853	10 ·294
	Hœmoptysis....	0	0	0	0								
	Pneumonia......	6	2	2	1								
	Dyspnœa........	0	0	4	0								
Rheumatic affections.	Rheumatismus acutus et chronicus.........	146	1	115	1	146	1	115	1	261	2	3 ·276	0 ·766
	Other diseases...	1493	6	1676	5	1493	6	1676	5	3169	11	39 ·786	0 ·347
	Total......	2343	42	2552	27	2343	42	2382	27	5625	69	63 ·[illegible]	1 ·373

Remarks on the table of diseases.

The class of fevers it will be seen forms a fourth part of all the admissions, and has occasioned an eighth of the mortality exhibited in the foregoing tables, the most severe cases and some of the deaths, it should be observed, occurred during the march of regiments to this place, or even whilst they were at other stations, particularly Bangalore and Secunderabad.

Of cholera 91 cases have occurred, with 38 deaths, being considerably more than one half of all the mortality. As already observed this disease broke out in 1833 and 37, and in both instances its character was of the low type; the treatment consisted of large doses of laudanum and stimulants, (particularly camphor dissolved in brandy, spiritus ætheris nitrici, and spiritus ammoniæ aromaticus,) with calomel and

opium; warm applications externally, and sinapisms or blisters to the epigastrium.

Bowel complaints form but a small number of the admissions, and have caused but few deaths; dysentery has been generally very mild, and was treated by some of the medical officers with nitric acid and laudanum, preceded by a dose of castor oil.

Hepatic diseases have but seldom occurred; and very few admissions have taken place from the class of chest affections, the table shews the nature of those which have happened.

Rheumatic affections are not unfrequent, but although the greatest number of the cases are returned as "acute," they have not, except in a few instances, been severe; the form has generally been articular, and the disease has readily yielded to local applications, with antimonials or Dover's powder. In one instance only in the entire number (241) of acute cases, has it been remarked that metastasis took place; this character of rheumatism so frequent in Europe is rarely observed in India, and amongst natives it may be said never to occur, in Europeans likewise it is seldom seen except in young men recently arrived who have generally contracted the disease on board ship. In the case above alluded to, the metastasis did not affect any of the internal organs, but the disease shifted from one joint to another. It may be worth while to remark that the cause of death in the two fatal cases recorded, was quite unconnected with the rheumatic affection, in both instances death occurred from fever of a remittent type, supervening in constitutions considerably worn out by previous disease; both these patients died comatose.

In the class of "other diseases" (which in the table will be observed to amount nearly to three-fourths of all the admissions, or 3,169 out of 5,025,) are included 1,156 of contusions, from bites, kicks and falls from horses, and nine cases of fracture; the remainder are made up of boils, ulcers and other trifling complaints which do not for the most part appear on the returns of Infantry regiments, but which as

incapacitating mounted soldiers from the performance of their duty, are received into hospital, and such cases swell greatly the amount of sick in the cavalry returns. Almost all the deaths in this class of disease have been caused by accidents, such as falls from horses, &c.

VELLORE.

Cantonment of Vellore.

The cantonment of Vellore lies 12 miles west of Arcot, and 80 miles in a westerly direction from Madras, and is occupied solely by native troops.

In former days it was a post of great importance, as it commanded the main-road leading to the upper Carnatic, but the occupation of Mysore by the British has rendered it now of little value in this respect.

Fort.

The fort is situated three quarters of a mile from the foot of a high range of rocky hills, which are naked and rough, and form the eastern boundary of an extensive plain surrounded by hills, called the Ambore Valley, the skirts of these hills are planted, but not thickly, with palm and date trees.

The fort is capacious, and besides the hospitals, barracks, magazines and quarters for officers, it contains several other buildings which are occupied by the families of the late Tippoo Sultan, and the ex-king of Kandy.

The ramparts are high and broad, strongly built and are provided with bastions and towers at short distances from each other; the whole is surrounded by a ditch of great breadth, having at all times a considerable depth of water, which is generally very clear and free from grass and weeds.

Village.

The town or village of Vellore lies between the fort and the range of hills on the eastern side of the

valley, it is clean and tolerably airy, and contains an extensive well supplied bazaar ; to the north of the village are the houses of the officers, placed in a double row, with the military road to Arnee running between them.

Places of Arms. The places of arms are situated about a quarter of a mile to the north of the fort, and close to them are the lines of the sepoys, a great many of whom however reside in the pettah intermixed with the inhabitants of the place.

The site of the fort and pettah of Vellore is sufficiently raised above the level of the flat ground in the vicinity, to prevent the lodgement of water.

Soil, produce, and salubrity of Station. The soil in the neighbourhood and throughout the valley, is a rich dark brown mould which produces a constant succession of luxuriant crops, being watered by the Palar river which runs through its whole extent, (passing the fort at a distance of half a mile,) and by springs which are numerous at the bottom of the contiguous hills. Rice and tobacco appear to form a large proportion of the cultivation in this valley, there is besides much natural vegetation, and numbers of trees both in and around the village, but particularly near the officers houses where they are too numerous, considering how little these localities are raised above the adjoining rice fields ; though these plantations must impede the free circulation of air, the access of which from the eastward is obstructed to a considerable degree by the high range of hills, their presence does not appear to be productive of any pernicious effect, for it is generally believed that although this station is a few degrees hotter than St. Thomas's Mount, Poonamallee or Wallajahbad, it is surpassed in salubrity by none in the division; and as far as regards the native constitution this is fully subtantiated by the fact, that regiments arriving from unhealthy malarious stations in a weakly state, have been observed to improve in health in a very surprising manner at this place, this was exemplified in the 9th Regiment Na-

tive Infantry in 1834, the men of which suffered severely from fever some time previously, in an unhealthy district in Coorg; and in the 40th Regiment Native Infantry in 1835, which also suffered to a great extent from fever, while stationed at Mangalore, and when marching through the Wynaad jungle.

Native Troops. The number of troops stationed here have generally been two, and sometimes three regiments; detachments however to the neighbouring civil stations, Chittoor, Chingleput and Cuddalore, are occasionally furnished from these corps, the sick of which are included in the returns from the Head Quarters of the regiment, the number and extent of these detachments during the last 10 years, have not however been so great as to interfere with the general results shown in the table which is appended.

Hospital. The Hospital is situated in the fort, and is constructed in the form of an oblong quadrangle, enclosing an area of 81 yards by 15, it is pent roofed and tiled, well ventilated and generally dry, the floor being well raised, but the roof is rather low and there is no verandah. This structure is divided into six large wards and four smaller rooms, these latter serve for dispensaries and surgeries, and four of the former are set apart one for the sick of each of the Native regiments, and one for the details of the station, they afford accommodation to upwards of 50 patients each.

VELLORE.

o. 6—*Table exhibiting the number of Admissions, and Deaths, from principal Diseases for 10 years.*

:LASSES.	DISEASES.	From 1829 to 1838. Aggregate strength 12,133 — 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions and Deaths from each class of disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each Class.	Total Deaths from each Class.	Average percentage of sick to strength.	Average percentage of deaths to sick.
evers	Febris ephemera	127	0	284	1								
	,, intermittens.	456	11	516	9								
	,, tertiana......	10	0	13	0	628	13	869	14	1497	27	12 ·040	1 ·803
	,, remittens....	16	2	6	1								
	,, continua....	19	0	50	3								
	Cholera........	33	19	11	4	33	19	11	4	44	23	0 ·353	52 ·272
iseases of ie abdomi- al viscera.	Diarrhœa......	49	5	42	2								
	Dysenteria Acuta et Chronica	19	1	27	4	68	6	69	6	137	12	1 ·101	8 ·759
	Hepatitis Acuta et Chronica...	2	0	3	1	2	0	3	1	5	1	0 ·040	20 ·0
iseases of ie Lungs & Heart.	Catarrhus......	10	1	17	1								
	Asthma.........	4	1	9	1								
	Phthisis pulmonalis.........	2	0	4	2	23	3	42	5	65	8	0 ·523	12 ·307
	Hœmoptysis....	1	1	1	0								
	Pneumonia.....	2	0	5	0								
	Dyspnœa.......	4	0	6	1								
:heumatic ffections.	Rheumatismus acutus et chronicus.........	375	4	359	2	375	4	359	2	734	6	5 ·903	0 ·817
	Other diseases..	1332	19	1449	15	1332	19	1449	15	2781	34	22 ·367	1 ·222
	Total....	2461	64	2802	47	2461	64	2802	47	5263	111	42 ·330	2 ·100

ARNEE.

Arnee is situated about 76 miles south-west from Madras, and about 20 miles south of Arcot. It is elevated about 400 feet above the level of the sea, and is somewhat higher than the surrounding plains.

It was formerly a strong fortress, and during Hyder's invasion of the Carnatic in 1782, his principal magazines were deposited in this place.

The public buildings, the barracks, hospital, officers' quarters, &c. are placed within its now decayed and dilapidated ramparts. It is a station for European troops and has only been occasionally occupied for some years past, serving as a temporary Depôt for corps proceeding up country, or pre-

vious to embarkation from the Presidency; in 1840 it was garrisoned by the 2nd Madras European regiment, which corps was embodied there.

Barracks. Immediately facing the parade ground are two bomb-proof ranges of buildings, forming the officers quarters, and behind these and about 300 yards distant, are the barracks calculated to accommodate one European regiment, which are also bomb-proofs, spacious and strongly built, they form three sides of a square, the fourth being occupied by a wall and the gateway; not far from them is the hospital, a commodious and substantial tiled building, in the form of an oblong square, it has a verandah on its inner side towards the area, and the entrance is on the north side. The southern side measuring 217 feet, with half of the east and west sides, form one continuous ward without partitions, its length being 365 feet; the remainder of the building is occupied on one side by the dispensary, the medical subordinates, and the hospital serjeant's quarters and a dead-room; the other by the female ward, store rooms and cook rooms. The floors are well raised, dry and made of brick coated with chunam. The middle part of the large ward is airy and well ventilated, but the ends are rather close, and require additional windows.

Hospital.

Situation. The ground upon which Arnee stands is somewhat low and flat, but water does not lodge on it even in the monsoon; a small river, which is partly fed by springs and affords a constant supply of good water, runs within a quarter of a mile of the fort.

The country around is open, the nearest hills which consist of granite and syenite, being six miles distant, and with the exception of a few straggling palmira trees, there is but little natural vegetation, small patches of stunted jungle only, appearing here and there. There are but few rice fields in the neighbourhood, the greater part of the cultivation around being dry grain. The soil of the plain extending to the neighbouring hills is chiefly composed of disintegrated rock

of primitive formation, mixed with sand; and in low situations it becomes loamy or clayey. In many places it contains much saline impregnation, the surface becoming covered with a white efflorescence in the dry season. This is found to consist chiefly of impure salts of soda.

The hills are known to be feverish, but the malaria arising from them does not affect Arnee, which in respect to climate must be considered a healthy, though an extremely hot station.

Health of the Station.

It has been observed that the troops, as well as the inhabitants of the village distant 200 yards, have generally enjoyed a fair proportion of health, although H. M. 41st regiment suffered severely from dysentery, at this station, in 1829. The constitutions of the men of that regiment were however greatly debilitated, and had acquired in many instances a scorbutic taint by their long residence in the wet climate of the Burmese territories, from whence they had arrived that year. As already observed this station has been only occasionally occupied for many years past, the usual table of disease cannot therefore be given, the following although comprising only two years is thought worthy of record, as bearing upon the question of the salubrity of the station.

ARNEE.

No. 7.—*Table exhibiting the Number of Admissions and Deaths from principal Diseases in Her Majesty's 41st Regiment, during the years 1829 and 1835.*

CLASSES.	DISEASES.	1829 and 1835. Aggregate Strength 1,386. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions & Deaths from each Class of Disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each Class.	Total Deaths from each Class.	Average percentage of sick to strength.	Average percentage of deaths to sick.
Fevers......	Febris ephemera	0	0	0	0								
	,, intermit: quot	29	1	43	0								
	,, tertian.......	0	0	3	0	146	2	163	2	309	4	22 ·294	1 ·294
	,, remittens....	40	1	29	0								
	,, continua.....	77	0	88	2								
	Cholera.........	12	3	11	0	12	3	11	0	23	3	1 ·659	13 ·043
Diseases of the Abdominal viscera......	Diarrhœa......	56	1	30	0								
	Dysenteria acuta et chronica..	102	17	124	11	158	18	154	11	312	29	22 ·510	9 ·294
	Hepatitis acuta et chronica...	65	3	33	3	65	3	33	3	93	6	7 ·070	6 ·122
Diseases of the Lungs.	Catarrhus.......	18	0	6	1								
	Asthma..	1	0	0	0								
	Phthisis pulmonalis...........	0	0	2	0								
	Hœmoptysis....	0	0	0	0	34	0	23	2	57	2	4 ·112	3 ·508
	Pleuritis........	0	0	0	0								
	Pneumonia.....	15	0	13	1								
	Carditis........	0	0	0	0								
	Palpitatio......	0	0	0	0								
	Dyspnœa.......	0	0	2	0								
Rheumatic affections.	Rheumatism: acutus et chronicus.........	51	0	30	0	51	0	30	0	81	0	5 ·844	0 ·0
	Other diseases..	486	4	442	3	486	4	442	3	928	7	66 ·955	0 ·754
	Total....	952	30	856	21	952	30	856	21	1808	51	130 ·447	2 ·820

N. B.—In	Strength.	Admissions.	Deaths.	Dysentry.	Deaths.
1829	714	1039	32	197	21
1835	672	769	22	29	7

During a period of 3 years and 2 months, from 1828 to 1832, out of a numerical strength of 2,699 European troops at Arnee, there were 3,429 admissions with 86 deaths, giving a percentage of 127·047 admissions to strength, and 3·186 deaths.

In the month of May 1840, a severe epidemic visitation of cholera was experienced by the 2nd European regiment, the weather for sometime previous had been unusually sultry, and the men were suffering from head complaints, thoracic congestion and palpitations, with great langour and depression of spirits; on the 22d of the month a heavy squall of wind, accompanied by rain from the north-west suddenly occurred, causing the thermometer to fall 10 degrees, and on the evening of the 23d cholera, in its most ag-

gravated form broke out, and in the course of that night and the morning of the 24th, 20 men were admitted with the disease, of whom 14 died; between that time and the 30th of the month, when the disease disappeared as suddenly as it arose, 41 cases occurred with 19 deaths, exclusive of upwards of 100 cases of choleroid-diarrhœa. On the 31st of May and 1st June, after a continuance of sultry weather, there was a heavy fall of rain when the disease ceased. It should be remarked, that the ditch of the fort contained much putrid water and filth, from which at the time the exhalations were highly offensive, and that diarrhœa prevailed as an epidemic during the month of April.

The remedy found most efficacious during the epidemic was the cold *douche* applied to the head, which in many cases appeared to be effectual in favouring re-action.

CHITTOOR.

Description of Chittoor and its vicinity.

The town of Chittoor is situated in the western part of the zillah of the same name, the surrounding country being hilly, and in parts even mountainous, it lies in a valley of irregular shape, said to be 1,100 feet above the marine surface, enclosed on all sides by hills except on the east; the hills generally are rugged, barren and rocky, composed of a coarse granite, gneiss and grey wacke, all more or less in a decaying state, but the valleys between them are very productive. The hills immediately around Chittoor are of the same description, being veined occasionally with iron ore, they are quite bare except towards the base, which is surrounded by a belt of stunted trees and shrubs.

River Poony.

Along the centre of the valley runs a river called the "Poony," which joins the Palar near Wallajahbad, during the monsoon season it is 400 yards in breadth, but in

the hot months it is merely a bed of dry sand, with a small rivulet running through it; its water is taken advantage of for the irrigation of the land in the vicinity, and several tanks are also supplied by it; the banks are muddy and slimy in some places, and emit very offensive effluvia during the beginning of the hot season.

Soil. The soil on the declivity of the hills and in the low grounds, is composed of the debris or detritus of the loftier parts, interspersed here and there with large masses of rock; in some places it is of considerable depth, in others shallow, sandy and gravelly, and mixed with argillaceous earth or blue clay, whilst in other parts again, it contains much carbonate or subcarbonate of iron.

The whole of the lower grounds of the valley are under rice cultivation, and dry grains are grown near the hills; the former situations are watered, as already stated, by the river and by tanks, which become marshy and very offensive when partially dried up.

Town and Fort. The town and fort of Chittoor, are on the south side of the river, distant 100 yards; the former is kept in a very imperfect state of cleanliness, and at the west end of the town close to the fort, are offensive ditches of stagnant water, the *fossé* surrounding the fort being also in a most obnoxious state; the rice fields reach close to the fort and town, and there is besides much natural vegetation, such as trees and shrubs, around the town, fort and the officers houses.

On a spot gently elevated and about half a mile distant, stands the jail, and between it and the town are the zillah courts, and courts of appeal, all excellent and suitable buildings.

Residences of Europeans. The Europeans both civil and military reside in commodious houses at some distance

from the town, on its south-east and south-west sides, in compounds thickly planted with trees.

The sepoys of the detachment stationed at Chittoor, amounting to between 150 and 200 men, have no separate lines but live in the village.

Climate. Chittoor which is about 70 miles from the sea in a direct line, is under the influence of the north east monsoon, but the sea breeze does not reach it with any regularity; the most prevalent winds are the north east and south west, and it is liable to calms, and to sudden squalls from all quarters, modified by the course and direction of the different ghauts or passes through the hills, and by the powerful radiation of heat, from rocky and sandy surfaces.

Thermometric range. The thermometer has been observed occasionally to rise to 140° of Fahrenheit, when exposed to the rays of the sun; but the annual range in the shade is from 56° to 100°; the greatest diurnal variation observed, has been 20°, and the common daily range from 8° to 10°; the mean of the annual heat being about 80°, which corresponds with the theoretical calculation of the temperature of the 14th degree of latitude.

Malaria, sources of abundant. It will be observed from what has already been stated that the sources of malaria abound at Chittoor, and the numerous admissions from intermittent and remittent fevers exhibited in the appended tables, will therefore not excite surprize; diarrhœa and dysentery are also endemial being particularly frequent during the monsoons, and after heavy falls of rain; bad ulcers are also of frequent occurrence; these several diseases affect the inhabitants of the place equally with the prisoners.

With a view to diminishing the extent of slimy surface exposed on the drying up of the tanks, they might be much reduced in size and deepened; the ditches near the

town and round the fort might be drained into the river and filled up; and a marshy situation not far from the large jail is also capable of being drained. The cultivation of rice should be prohibited within a certain distance of the town, and the natural vegetation thinned; so powerful are the exhalations from the tanks and ditches at times, particularly early in the morning and after sunset, that they produce in those exposed to their influence, nausea and vomiting, with a disagreeable taste in the mouth.

Health of European Residents.

The Europeans resident at Chittoor have generally enjoyed good health, they live in houses considerably raised from the ground, and are in a great measure removed from the action of the common exciting causes of fever, they are however so few in number that no general conclusions can be drawn as to the effects of the climate upon the European constitution.

Palmanair Hills, description of

As connected with Chittoor and situated in the same district, Palmanair may be briefly noticed, being an occasional place of retreat for Europeans in the warmer months of the year; it lies nearly twenty-four miles due west from Chittoor, where the country becomes mountainous, and has been calculated to be 2,312 feet above the level of the sea, and consequently 1,200 feet higher than Chittoor. The temperature is 7° or 8° less, and the nights are always pleasantly cool at Palmanair, admitting of refreshing and undisturbed repose, and the coolness of the mornings invites to exercise.

The mountains are of the same structure, and the soil in the valley and indeed throughout the whole district, is of the same description as at Chittoor, i. e. sandy and gravelly, with loose craggy rocks dispersed here and there.

There are several tanks, but no morasses of any extent in the neighbourhood.

The jungle which passes north of Vellore, approaches on the eastern side to within a short distance of Palmanair.

and occupies a very irregular surface, varying in breadth from one to four miles.

Climate of Palmanair.

Palmanair appears to be healthy, no particular disease having been observed to originate there, but it may be remarked, the bungalows are not far from the west-side of the jungle alluded to, and whether the wind during the north-east monsoon blowing over it, would produce malarious disease cannot be ascertained, as during that period of the year no Europeans reside there; and this point with regard to the natives of the place, has not been determined. It is highly probable however, that it would prove unhealthy from October till March.

Before entering more fully into the nature of the diseases met with at Chittoor, it will be proper to give a short description of the site and construction of the jails and hospital.

Jails.

There are three separate buildings occupied by the prisoners, viz. the principal jail, where male prisoners of every class are confined, a prison for females, and an hospital.

The first is situated on an elevated airy spot and sandy soil, half a mile from the town, rice is cultivated close up to it, and on the left there is a considerable swamp; it is an extensive structure consisting of three parallel ranges, the two external measuring 172 feet by 37, and the centre 130 feet by 23, they stand 8 yards apart from each other, and are well constructed brick buildings, pent roofed and tiled; they are tolerably well ventilated but not provided with verandahs, the floors are dry being well raised from the ground, and the height of the walls is 9½ feet.

The two outer ranges are subdivided into small apartments by walls only 6 feet high, and the middle one is divided into two apartments which, unless when the jail is much crowded, are used only as workshops, for weaving, &c.

A trench or fosse of about 8 feet wide by 4½ in depth, lined with masonry, encircles these buildings, outside which at the distance of 21 feet, is a substantial wall 11 feet high; the wall is provided with a watch tower at each corner, and has a gateway on the western face, on each side of which are enclosed sheds, to shelter the sepoys and peons on guard, and the prisoners when employed in cleaning rice.

The jail allotted to the female prisoners stands about 100 yards distant, it is a mud building forming two parallel ranges, each 67 feet long, 16 broad, and 28 feet apart, connected by a wall at either end; one of these buildings is used as a paper manufactory, and the other as a place of confinement, the floors are sufficiently raised and perfectly dry.

The jails which were erected in 1809 are in good repair, and can accommodate 800 prisoners.

Hospital, situation of, The hospital is situated about 200 yards from the large jail, it is a substantial terraced building, originally designed for a provincial lunatic asylum, it forms three sides of a quadrangle and is subdivided into seven wards, and a dispensary; all the wards are well ventilated, a terraced verandah being built on the outer face; six of the wards are 22 feet by 9, and 9 feet high, the seventh is of larger dimensions, the whole having accommodation for 40 patients; the floors are laid with brick chunamed over, well raised and dry; cook rooms and other offices are attached, and there is a well of good water within the hospital enclosure.

Diet, labour, &c. For the system of dieting and clothing the prisoners, see table at the end of the report for this division.

Diseases. Fevers and bowel complaints are said to be more severe and fatal among the inhabitants of the place, than the prisoners, which may be attributed to the latter being better housed and fed. It has been observed also within the ast two or three years, that fever has been less preva-

lent than for several years previous thereto, and that dysentery and diarrhœa have been on the increase; no cause has been assigned, nor can any satisfactory explanation be given, to account for this circumstance.

Famine of 1833-34 only partially felt.

This district suffered comparatively in a moderate degree from the famine of 1833 and 34, and the increase in the number of prisoners, sickness and death, which then occurred, was much less than in the jails in the low country. The crops did not entirely fail throughout the hilly country, there being numerous natural springs which were not wholly dried up, but although absolute want and starvation did not exist, great scarcity prevailed, and led to a considerable increase of crime.

JAIL OF CHITTOOR.

No. 8.—*Table exhibiting the Number of Admissions and Deaths of the Convicted Prisoners, from each Class of Disease for 10 years.*

CLASSES	DISEASES.	From 1829 to 1838. Aggregate strength 3,488. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions & deaths from each class of Disease. 1st Half. Ad.	Dd.	2d Half Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Average percentage of sick to strength.		Average percentage of deaths to sick.	
Fevers......	Febris ephemera	51	0	64	0										
	,, intermit. quot	230	3	314	10										
	,, tertiana	1	0	15	0	489	7	698	12	1187	19	34	·030	1	·600
	,, remittens..	205	3	301	1										
	,, continua....	2	1	4	1										
	Cholera........	29	13	16	13	29	13	16	13	45	26	1	·290	57	·777
Diseases of the abdominal viscera.......	Diarrhœa	84	11	128	18										
	Dysenteria acuta et chronica.	52	11	82	17	148	22	230	38	378	60	10	·837	15	·873
	Obstipatio......	12	0	20	3										
	Hepatitis acuta et chronica...	2	2	0	0	2	2	0	0	2	2	0	·057	100	·0
Diseases of the Lungs.	Catarrhus...	3	0	4	0										
	Asthma..........	14	3	5	0										
	Pneumonia.....	4	4	6	4	21	7	17	5	38	12	1	·089	31	·578
	Phthisis pulmonalis	0	0	2	1										
Diseases of the Brain.	Apoplexia......	0	0	1	1										
	Paralysis.	3	0	3	2	7	2	8	3	15	5	0	·430	3	·333
	Phrenitis.	4	2	0	0										
	Mania.........	0	0	4	0										
Eruptive fevers......	Variola.........	2	1	3	0										
	Varicella........	39	0	5	0	51	1	9	0	60	1	1	·720	1	·666
	Erysipelas.......	0	0	1	0										
	Rubeola.........	10	0	0	0										
Dropsy......	Anasarca......	35	14	21	11	35	14	21	11	56	25	1	·605	44	·642
Rheumatic affections.	Rheumat. acutus et chronicus.	165	3	116	3	165	3	116	3	231	6	8	·056	2	·135
Venereal affections.	Syphilis primitiva	3	0	5	0										
	Gonorrhœa.......	3	0	3	0	9	0	11	0	20	0	0	·573	0	·0
	Hernia humoral..	1	0	3	0										
	Strictura urethræ	2	0.	0	0										
Specific diseases.....	Atrophia........	3	3	8	7										
	Lepra..........	2	1	1	1										
	Dracunculus.....	0	0	0	0	6	4	18	10	24	14	0	·688	58	·333
	Scrophula	1	0	0	0										
	Ulcus phagedenicum........	0	0	9	2										
Diseases of the Eye..	Morbi Oculorum..........	22	1	32	0	22	1	32	0	54	1	1	·548	1	·851
Do. of the Skin......	,, Cutis.....	100	2	81	1	100	2	81	1	181	3	5	·189	1	·657
	Other diseases..	836	11	957	20	836	11	957	20	1793	31	51	·404	1	·728
	Total....	1920	89	2214	116	1920	89	2214	116	4131	205	118	·520	4	·958

JAIL OF CHITTOOR.

No. 9.—*Table exhibiting the Number of Admisssons and Deaths of the Prisoners under Trial, from each Class of Disease for* 10 *years.*

CLASSES.	DISEASES.	From 1829 to 1838. Aggregate strength 1,436. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions & deaths from each class of Disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Average percentage of sick to strength.	Average percentage of deaths to sick.
evers......	Febris ephemera	3	0	3	0								
	,, intermitt quot	132	4	118	3								
	,, tertiana......	0	0	0	0	138	4	126	3	264	7	18 ·461	2 ·651
	,, remittens.....	2	0	4	0								
	,, continua.....	1	0	1	0								
	Cholera.........	31	23	24	17	31	23	24	17	55	40	3 ·846	72 ·727
iseases of he abdomi-nal viscera.	Diarrhœa.......	16	6	15	6								
	Dysenteria acuta et chronica.	21	5	35	11	62	11	73	21	135	32	9 ·440	23 ·703
	Obstipatio.......	25	0	23	4								
	Hepatitis acuta et chronica...	2	1	1	1	2	1	1	1	3	2	0 ·209	66 ·666
iseases of he Lungs & Heart.	Catarrhus......	2	1	3	0								
	Pneumonia.....	3	2	3	3								
	Carditis	1	0	1	1	7	3	9	6	16	9	1 ·118	56 ·250
	Phthisis pulmonalis.........	1	0	2	2								
Diseases of the Brain.	Apoplexia..	1	1	0	0								
	Epilepsia........	1	0	1	0								
	Paralysis........	0	0	1	0	4	1	2	0	6	1	0 ·419	16 ·666
	Amentia........	1	0	0	0								
	Mania..	1	0	0	0								
Eruptive fevers.	Variola.........	0	0	2	2								
	Varicella.	0	0	11	0	1	1	13	2	14	3	0 ·979	21 ·418
	Erysipelas......	1	1	0	0								
ropsies....	Anasarca.......	5	4	15	8	5	4	16	9	21	13	1 ·468	61 ·904
	Ascites.........	0	0	1	1								
Rheumatic affections.	Rheumat: acutus et chronicus.	4	0	3	1	4	0	3	1	7	1	0 ·489	14 ·285
enereal affections..	Syphilis primitiva............	3	0	4	0								
	Gonorrhœa.....	1	0	0	0	5	0	4	0	9	0	0 ·629	0
	Hernia humoralis............	1	0	0	0								
pecific diseases.	Atrophia........	0	0	5	5								
	Lepra...........	2	0	0	0								
	Dracunculus....	0	0	0	0	2	0	10	6	12	6	0 ·839	50 ·0
	Ulcus phagedenicum.........	0	0	5	1								
iseases of the Eye.	Morbi oculorum	5	0	9	0	5	0	9	0	14	0	0 ·079	0
o. Skin..	,, Cutis......	115	0	116	0	115	0	116	0	231	0	16 ·153	0
	Other diseases..	84	10	122	6	84	10	122	6	206	16	14 ·405	7 ·767
	Total....	465	58	528	72	465	58	528	72	993	130	69 ·440	13 ·091

Remarks on the foregoing tables of disease.

The average number of convicted prisoners was increased from 300, the usual strength, to 550, and the number of those under trial during the two years of famine, from 95 the usual average, to 334; the amount of sickness and death was however proportionally greater than the increase of the strength. In the convicted 1128 admissions, with 91 deaths took place, being more than a fourth part of all the sickness during the ten years ending in 1838, and somewhat less than one half of the total mortality in the same period; while among those waiting for trial, 438 admissions with 91 deaths occurred, being nearly one half of all the admissions from this class of prisoners, and five-sevenths of all the deaths. The average annual per centage of sick to strength, and of deaths to sick treated, is given in the tables for both classes, and excluding the two years adverted to, is as follows for the remaining eight; amongst the convicted the average of sick to strength is 125 per cent, and of deaths to sick treated somewhat less than 4 per cent; among those under trial the average of sick to strength is 73 per cent, and the deaths to sick treated, are reduced to 7 per cent. The most numerous and fatal diseases during these two years, were *cholera*, *diarrhœa*, *dysentery* and *anasarca*.

Fever.

The type of fever is generally what has been termed the bilious intermittent and remittent, attended with much functional derangement of the chylopoetic viscera, particularly of the stomach and liver, the latter being especially implicated in the hot season; and in addition to much nausea, bilious vomiting and headache, the conjunctivæ, tongue and occasionally the surface of the body, assume a yellowish colour.

The tendency to relapse is found to be great, and in many instances anasarca and diarrhœa of a fatal character have followed the third or fourth attack, when occurring within a few consecutive months. In the treatment of both forms of the disease, it has been usual to

exhibit an emetic in the first instance, followed by a cathartic, mercurials being afterwards given to restore the function of the liver; topical depletion by means of leeches to the epigastrium has also been employed when necessary; this plan of treatment with a more free use of purgatives in the remittent form, has generally been successful, aided by quinine or bark, which were frequently necessary to check the great tendency to periodicity in both types.

Dysentery and diarrhœa.

Much mortality is annually occasioned by diarrhœa and dysentery which are endemial, and have been particularly frequent since 1833. In the opinion of the medical officer, they are produced by malarious miasm, and cases not unfrequently occur as the sequelæ of fever; both diseases partake of the same character, being prone to run into ulceration of the large intestines, particularly at the caput cæcum, and sigmoid flexure.

The treatment has also been very similar in both diseases, the only difference having been the employment of mild antiphlogistic means in the first stage or early period of the dysenteric cases; and a few leeches only can be applied in these cases with safety, for it has been observed that depletion has occasioned a sinking of the system, and occasionally a fatal aggravation of the ulceration. Ipecacuanha with opium, combined with tonic decoctions, quinine and astringents, have been generally used with good effect, along with counter irritation over the abdomen by means of blisters, and the ointment of the tartrate of antimony.

Cholera.

Cholera of a low type appeared at Chittoor, in an epidemic form, in the years 1833 and 1837. The only peculiarity in the treatment adopted, has been the employment of the sulphate of alumina, on one of these occasions, to restrain the purging and vomiting; and in some cases it was thought to be attended with advantage. The mortality has however been 57 per cent, on the number treated.

Dropsy. The cases of anasarca have frequently followed as a sequela of fever, and have been for the most part attended with diarrhœa; as all these patients were greatly reduced in strength, the result has consequently been unfavorable.

Ulcers. Several cases of phagedenic ulcers may be seen by the table to have occurred, and amongst the class of "other diseases," ulcers form a large proportion of the admissions, many of which are stated to have assumed a sloughing character; the general health in all these cases was more or less disordered, many of the patients had occasional paroxysms of fever, others suffered from diarrhœa, and the tongue was generally found to be thickly coated with a yellow fur. In such cases charcoal poultices were first applied, followed by cataplasms made with the margosa leaf, and a wash consisting of a weak solution of nitric acid, which mode of treatment was found to be highly beneficial. In others again, where the constitution had been severely injured by repeated attacks of fever, the ulcers after having degenerated into large sores, became covered with a thick slough of a dirty white colour, attached to an irritable bleeding surface, which on falling off, exposed the muscles, and sometimes even laid bare the bones of the leg to a considerable extent; diarrhœa was generally present in these cases.

With regard to the constitutional treatment, bark and quinine were the remedies found most useful, and until the system became invigorated no good effect followed the use of any local applications. In no instance have these ulcers assumed the character of hospital gangrene, although in some cases the sloughing has gone so far as to expose nearly the whole length of the tibia, or the entire of the dorsum of the foot, (they have been exclusively confined to the lower extremities,) and have not in any one instance evinced the slighest

tendency to spread by contagion. Sloughing ulceration which prevailed to a great extent at particular periods, as in the years 1830, 1833, 1837 and 1838, is supposed to arise from the same causes which produce fever, and other endemic diseases at the station. The inhabitants of the village are as liable to this form of ulceration as the prisoners, and are affected precisely at the same periods. At such seasons all sores or cuts especially in weakly subjects, take on an unhealthy action, as was strongly exemplified in 1830; twelve men on attempting to escape from prison received sabre wounds for which they were admitted into hospital, in those who were weakly the wounds assumed a sloughing character, while in those whose constitutions were robust, though equally severe, and treated in the same ward, they healed rapidly. In the same year fevers and bowel complaints were numerous, the season was irregular, the rain having continued throughout the whole of the warm months, and it may further be added, that the monsoon of the preceding year was scanty.

SOUTHERN DIVISION OF ARCOT.

Description of South Arcot. This collectorate is situated between north latitude 12°16″, and 11°26″, and east longitude 79°50″, and 78° 45″; being bounded by the northern division of Arcot on the north; on the south by Trichinopoly, and the Coleroon river which separates it from Tanjore; on the west by Salem; and on the east by the bay of Bengal. Its average length from north to south is 75 miles, and its breadth from east to west, 63 miles, presenting a surface which is estimated at 8,049 square miles.

The aspect of the country resembles that of the other parts of the Coromandel coast, being a low level near the sea, rising into hills in the interior, but which in this district are not in continuous ranges.

Rivers and Tanks. A large river the Panaur, and several smaller streams run through the district from the westward to the sea. The Panaur has its source in the Nundidroog hills in Mysore, from whence it takes a south east course, and falls into the sea at Cuddalore; and the Coleroon as it flows past the southern boundary of this collectorate, may be mentioned as partly belonging to it. The land in the vicinity of these rivers is irrigated from them by means of channels of considerable extent, from which also various tanks are supplied, and which in the dry season when the rivers become low and dried up, afford a supply of water for the purposes of cultivation. Several of these tanks are of very considerable extent, and there are upwards of 3,000 of smaller size :

The Vizram tank in the talook of Manangooty, in the the south east extremity of the collectorate, is filled from the Coleroon, and is eleven miles in length, and of considerable breadth, the whole of the talook being irrigated from it. The Chullumbrum talook is irrigated by a large channel from the Coleroon, which also serves as a canal for the conveyance of ore to the iron foundery of Porto Novo, and communicates with the Vellar river near to that place. There are likewise two large tanks in the talook of Phawnagherry supplied partly from the Pellar river.

Soil. The soil near the coast is sandy and generally barren, further inland it is mixed with a black mould, and in many places becomes red, and gravelly, and more productive; a great portion of the land lies waste, or is covered with a stunted jungle, and it is calculated that not more than one-eighth part of the district is under cultivation, or about 2,45,349 cawnies. The parts under cultivation are very productive, and the clearing of the land is annually progressing.

Vegetable produce. Rice and other grains grow luxuriantly, cotton and indigo being also produced; cotton cloth was formerly

Cotton Trade. manufactured to a considerable extent for exportation, but has been in a great measure superseded

by English manufactures, there is still however some trade carried on, in blue and other native cloths, and also in indigo. Much of the land is favorable for the growth of cotton, and native husbandry is not seen to better advantage in any part of the Carnatic than in south Arcot.

Talooks. The collectorate is divided into 13 talooks, of which Cuddalore is the principal, they vary much both in size and population. The amount of the latter ranges from 15, to 70,000 in the several talooks. The great mass of the people are ryots, but many are occupied in the manufacture of cotton goods. The proportion of Mahomedans to Hindoos is about one to thirty.

Town of Cuddalore. The town of Cuddalore the capital of south Arcot, is situated on the sea coast, close to fort St. David, about 100 miles south of Madras, and 16 south of Pondicherry. It is the general depôt for European pensioners, and the principal station of the zillah, in which are the courts, jails, &c.

River Panaur. The Panaur river, the origin and course of which have been already described, as it approaches the coast, takes a sweep to the north, and bends again to the south, close to and on the west side of fort St. David; and, running parallel to the beach for three or four miles, is only separated from the sea by a bank of sand, in some places but a few hundred yards in breadth; it enters the sea about a mile below the town of Cuddalore, being joined at its embrochure by the Carangooly river, a stream of some size, running from the southward.

At the point where the Panaur takes a northerly direction at Vanicaput, a branch is given off from it which runs eastward and joins the main river again in its southerly course, thus enclosing a semicircular tract of land, on which stands the new town of Cuddalore; the old town being on its opposite or southern side. The tide flows several miles up the river which may be said during the dry months, to be more an inlet of the sea or back water, than a fresh water river.

New Town.

Its depth is about six feet when the tide is low, and a muddy bank of considerable extent is exposed, from which disagreeable odours arise, especially in the hot season.

Swamps.

There is also a small swamp immediately to the north of the European pensioners lines which is daily flooded, and though at times very offensive, it does not seem productive of injurious consequences.

Low site of the town and vicinity.

The site of Cuddalore, and its immediate vicinity, is not more than five feet above the level of the sea, the soil being sandy and mixed with clay; the gardens in new town are planted with ornamental trees and shrubs, and the roads are lined with majestic banian trees.

Aspect of the surrounding country.

The country around is generally open, there being no jungle of any importance, and no hills within many miles; a considerable part is under wet cultivation, irrigated from rivers and tanks which are numerous.

Salubrity of Station.

From the lowness of its site, and the quantity of water on all sides, Cuddalore might be expected to prove an unhealthy spot, such however is not the case, for both the native inhabitants and European residents, enjoy a remarkable immunity from disease; and new town, and fort St. David are proverbially healthy.

Water.

There are several small tanks near the town, the water of which is brackish, as is also that from wells, which can only be used for culinary purposes; but remarkably pure drinking water is procured at the distance of about half a mile.

Climate favourable to convalescence.

The climate like that of Madras is exempt from sudden vicissitudes of temperature, and it has been observed that storms, or sudden atmospherical variations are less frequent here, than on the more northern

parts of the Coromandel coast. Cuddalore is found to be favorable to convalescence from acute attacks of disease, and is also beneficial in that irritable state of the constitution which frequently remains after severe and long continued fever, and generally in cases in which there is much constitutional derangement, without serious organic disease ; it does not appear to possess any salutary influence in pulmonary affections. Sick officers and convalescents not unfrequently resort to Cuddalore for change of air, and several bungalows have been erected in new-town for their accommodation, which are procurable at moderate rents.

The number of pensioners residing here generally amounts to upwards of 250, they live with their families in the old-town, in neatly built houses, which are laid out in regular streets lined with trees, a small garden being attached to each. They perform no duty, but are in some degree under military control, an officer being in charge of the Depôt.

Diseases of European Pensioners.

It may be interesting to shew in a tabular form, the diseases to which European soldiers long resident in India, are subject, and the ratio of mortality among them.

DEPOT OF CUDDALORE.

No. 10.—*Table exhibiting the Number of Admissions and Deaths from each Class of Disease for 9 years.*

CLASSES.	DISEASES.	1829 to 1838.* Aggregate Strength 2,269. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions & Deaths from each class of Disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each Class.	Total Deaths from each Class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
Fevers......	Febris ephemera	7	0	2	0	27	2	46	3	73	5	3 ·217	6 ·849
	,, intermit.quot	17	1	35	2								
	,, tertiana......	0	0	0	0								
	,, remittens.....	1	0	1	0								
	,, continua......	2	1	8	1								
	Cholera.........	3	2	7	4	3	2	7	4	10	6	0 ·440	60 ·0
Diseases of the Abdominal viscera.......	Diarrhœa........	32	6	56	10	112	17	143	21	255	38	11 ·238	14 ·901
	Dysenteria acuta et chronica.	59	9	65	9								
	Hœmorrhois.....	21	2	22	2								
	Hepatitis acuta et chronica...	66	6	72	3	66	6	72	3	138	9	6 ·081	6 ·521
Diseases of the Lungs and Heart	Catarrhus......	10	1	9	3	56	13	39	8	95	21	4 ·186	22 ·105
	Asthma........	11	0	10	2								
	Phthisis pulmonalis..........	7	7	2	1								
	Hœmoptysis....	0	0	2	1								
	Pneumonia.....	5	1	1	0								
	Dyspnœa.......	23	4	15	1								
Diseases of the Brain.	Apoplexia......	1	1	5	3	88	6	105	9	193	15	8 ·505	7 ·772
	Epilepsia.......	4	2	8	3								
	Paralysis.......	6	1	10	1								
	Delirium Tremens et Ebrietas............	77	2	82	2								
Rheumatic affections.	Rheumat. acutus et chronicus	103	8	101	4	103	8	101	4	204	12	8 ·990	5 ·882
	Other diseases..	178	15	223	14	178	15	223	14	401	29	17 ·672	7 ·231
	Total....	633	69	736	66	633	69	736	66	1369	135	60 ·334	9 ·861

Remarks on preceding table. The per centage of diseases of an acute nature, is less than among effective troops, but chronic affections, as might naturally be expected, are more prevalent, and the mortality is considerably greater from both.

The annual average strength for nine years has been 252, and the average annual admissions into hospital 152, or 60 per cent on the strength; and the average annual deaths have been 15, or nearly 10 per cent on the number treated.

The greatest mortality has occurred from bowel complaints and hepatic affections, a third part of all the deaths having

* Exclusive of 1832.

been produced by these diseases; the next most fatal class, is that of diseases of the lungs, which have been chiefly of a chronic character; and the third, diseases of the brain.

An account has been obtained of 42 *post mortem* examinations, and it may be useful to shew in a concise manner, the appearances presented on dissection.

Diarrhœa Cases, No. 6. Large intestines ulcerated in all; liver enlarged of a pale colour in two; tuberculated in one; in three natural.

Dysentery, Acute, No. 5. Intestines deeply, and extensively ulcerated in all; abscess of liver in one, and this organ was pale and hard in two; in the remaining two natural.

Dysentery Chronic, No. 5. Large intestines ulcerated in all, in two the ulcers chiefly confined to the rectum, and in one they were pale and flabby; abscess of liver in one and this organ was enlarged, dark coloured and mottled in two, natural in the remaining two.

Hepatitis, No. 6. Large hepatic abscess in three, liver tuberculated in one, enlarged, hard and pale in the remaining two.

Phthisis pulmonalis, No. 3. Lungs tubercular in two; abscess of liver in one, the latter organ enlarged in another, in the remaining one healthy.

Dyspnœa, No. 3. Heart enlarged in one, and pericardium full of serum; in another large abscess in left lung; liver tubercular in one, in two healthy.

Ascites, No. 4. Liver pale, hard with tubercular nodules in all, some of the tubercles softened.

Rheumatism Chronic, No. 6. Water in pleura, and pericardium in one; lungs dark, and partly hepatized in two; large gut ulcerated in one; liver pale, and hard in two, enlarged, and dark in one, abscess in liver in one, this organ was natural in two.

Delirium Tremens, No. 4. Brain softened in all, with water in ventricles; abscess of liver in one, in two hard, and very pale, in one liver natural.

Jail. The jail is a large upstair building, which was in former days a factory, it is substantially built forming three sides of a quadrangle; the lower story is appropriated for prisoners, in which there are fourteen large cells, one being used as an hospital; the average number of prisoners is about 400, but it can accommodate 600. It has been occupied only since 1835, but as no native troops are stationed in this collectorate, it has been thought proper to annex a return of sick amongst the prisoners, from that period up to 1841 inclusive, no other data being available, from which an account of the diseases peculiar to the climate can be given; there appears however to be no reason for supposing, that they differ materially from those to which the natives of the neighbouring collectorates are subject, and which have already been noticed; the climate, mode of living, customs, &c. being perfectly similar in all.

JAIL OF CUDDALORE.

o. 11.—*Table exhibiting the Number of Admissions and Deaths of Convicted Prisoners, from each Class of Disease for 7 years.*

-ASSES.	DISEASES.	1835 to 1841. Aggregate strength 1,953 — 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions and Deaths from each class of Disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
-vers,.....	Febris ephemera	22	0	32	0	175	5	283	4	458	9	23 ·451	1 ·965
	,, intermittens.	153	5	249	3								
	,, continua....	0	0	2	1								
	Cholera........	6	2	8	5	6	2	8	5	14	7	0 ·716	50 ·000
eases of -e Abdo- -inal vis- -era..,....	Dysenteria acuta	35	3	34	4	58	8	71	14	129	22	6 ·605	17 ·054
	,, chronica..	23	5	37	10								
	Diarrhœa.......	35	6	44	4	69	8	75	4	144	12	7 ·373	8 ·333
	Colica..........	3	0	0	0								
	Obstipatio......	2	0	1	0								
	Hœmorrhois.....	1	0	4	0								
	Dyspepsia......	28	2	26	0								
eases of -e Lungs.	Catarrhus......	1	0	3	1	4	0	7	2	11	2	0 ·563	18 ·181
	Asthma........	1	0	3	0								
	Dyspnœa.......	2	0	1	1								
eases of -e Brain.	Epilepsia.......	1	0	0	0	13	0	15	0	28	0	1 ·433	0 ·0
	Cephalalgia	12	0	14	0								
	Amentia........	0	0	1	0								
-ptive -vers....	Variola.........	3	2	0	0	37	2	34	1	71	3	3 ·635	4 ·225
	Varicella.......	32	0	31	1								
	Erysipelas......	2	0	0	0								
-psy.....	Anasarca.......	5	5	12	1	5	5	14	1	19	6	0 ·972	31 ·578
	Ascites.........	0	0	2	0								
-umatic -tions..	Rheumat. acutus et chronicus...	74	0	63	4	74	0	63	4	137	4	7 ·014	2 ·919
-ereal -ctions.	Syphilis primitiva............	2	0	0	0	5	0	2	0	7	0	0 ·358	0 ·000
	,, consecutiva...	1	0	1	0								
	Hernia humoralis..............	1	0	0	0								
	Strictura urethræ	1	0	1	0								
-ific -ses.....	Atrophia........	3	2	1	1	11	3	3	2	14	5	0 ·716	35 ·714
	Lepra..........	2	1	2	1								
	Dracunculus....	5	0	0	0								
	Scrophula.......	1	0	0	0								
-ases of -e Eye..	Morbi Oculorum	8	0	6	0	8	0	6	0	14	0	0 ·716	0 ·600
,, Skin..	cutis.........	70	0	16	0	70	0	16	0	86	0	4 ·403	0 ·000
	Other diseases..	166	0	138	5	166	0	138	5	304	5	15 ·565	1 ·646
	Total....	701	33	735	42	701	33	735	42	1436	75	73 ·527	5 ·222

PONDICHERRY.

The town of Pondicherry, once celebrated as being the capital of the extensive French settlements in India, was, when in the possession of the British, (i.e. till 1817, when it was ceded to its former masters) attached to the southern division of Arcot. The town lies on a barren sandy plain close to the beach, situated in north latitude 11°57″, and east longitude 79°54″, distant south of Madras 85 miles. The trade and importance of this place have of late years greatly declined, and but little intercourse exists between it and the East India Company's territories; the extent of sea coast appertaining to the settlement, is about five miles, and its breadth from three to four miles inland, and the population of the town amounts to from 25,000, to 30,000 inhabitants, including both natives and persons of European (French) descent.

The records of the Medical Board Office do not contain any information of interest, respecting the climate or medical statistics of this place.

It may however be noticed here as a fact of great importance, that hepatic complaints, especially of an acute form, are entirely unknown amongst the French inhabitants of this place. This exemption from a disease so prevalent and fatal amongst the British residents in India, is attributed to their mode of living being so different both in regard to food and drink; the latter consuming much animal food, malt and spirituous liquors, and strong wines; whereas the former live more on vegetable food and curries, and use little else than the light wines of France.

PORTO NOVO.

Porto Novo a sea port town 18 miles south of Cuddalore, in north latitude 11° 28″, and east longitude 79° 49″, has of late years risen into some importance, from the circumstance of an extensive iron foundery having been established

there, by a company of European gentlemen; the ore which is found in great abundance in the vicinity, is said to be of superior quality, and to yield steel of the best description; some difficulty has however arisen in finding a market for the pig iron, which has been smelted in large quantity, and which has consequently thrown a damp on the speculation; it may however be expected that in course of time this difficulty will be overcome.

CHINGLEPUT.

Situation and Boundaries. This district or collectorate, formerly called the Jagghire, runs along the Coromandel coast about 120 miles, and is of unequal extent inland, its average breadth being about 45 miles; it presents an area computed at 3020 square miles. On the north, it is bounded by the collectorate of Nellore, on the south and west, by the southern and northern divisions of Arcot, and on the east, by the bay of Bengal.

Appearance of the country. The district in general is low, and interspersed here and there with hills, and the soil is very indifferent being sandy, with large detached masses of granite projecting in many places; in other parts of the district it is dry, and from want of water, uncultivated, but cocoanut and palmyra trees, natives of such soils, are abundant, and thrive without trouble. Inland the country becomes more clayey and is of course more productive. The whole extent of land under cultivation is estimated at 72,000 cawnies; the chief produce being dry grain, betel, oil, fruits and vegetables, all of which find a ready market at Madras.

Soil.

The sources of irrigation are chiefly tanks, there are also springs, rivers, wells, ponds, sluices and *annicuts; the water in the tanks collected during the monsoon, is reserved for irrigation in the dry season, which lasts for nearly nine months of the year.

The only river of much importance is the Palaur which rises among the Nundidroog hills in Mysore, and after

* Works of masonry made to divert the water of rivers from its natural course.

a winding course of 220 miles through Mysore and the Carnatic, passing Arcot, Wallajahbad and Chingleput, falls into the sea at Sadras ; there are a few smaller streams in the district and several lakes, as the Ennore, Pulicat and Sadras lakes; and also many large tanks, such as the Chembrunbacum, Ootramaloor, Redhills and the Carangooly tanks. There are no mountains in the collectorate, but there are several rocky and barren hills, as St. Thomas' Mount, the Palaveram, Sheevarum, Tripasore and Carangooly hills.

Climate. The climate does not materially differ from that of Madras.

Talooks. The collectorate is divided into small districts or talooks seven in number, named Carangooly, Ootramaloor, Conjeveram, Chingleput, Manungulum, Tripasore and Sydapet; the principal towns are Conjeveram, Symbrambacum, Chingleput the capital of the district, Covelong and Sadras ; and the military stations are Wallajahbad, Palaveram, St. Thomas' Mount and Poonamallee.

Population. The extent of the population in 1837, amounted to 336,395, or 111 to each square mile ; there being males 174,471, and females 161,924, and the number of houses amounted to 66,609, being 4½ persons to each house.

Employment. The principal employment of the inhabitants is agriculture, the only article of manufacture being coarse cloth, and even that is carried on to a very limited extent. The great mass of the population are Hindoos, Mahomedans being but thinly scattered over this part of the country.

Conjeveram. Conjeveram is situated in a valley upon the western boundary of the collectorate, and formerly belonged to north Arcot ; it is a large town, pretty regularly built, the streets are broad and planted with cocoanut trees, and a small stream runs along its western side. The soil in the neighbourhood is somewhat clayey, from the decomposition of the felspar which abounds in the granite, and proves very fertile ; the river and surrounding tanks are also favorable

to cultivation, the inhabitants are principally ryots and weavers. Many brahmins reside here, and the large pagoda or temple at Conjeveram is greatly famed in hindoo mythology. It is one of the strong holds of hinduism in southern India.

Symbrumbacum — The town of Symbrambacum lies 17 miles west from Madras, the inhabitants are entirely ryots; at this place there is a remarkably large tank 20 miles in circuit, formed by an embankment between two natural ridges of ground; this tank irrigates an extent of land sufficient to give employment to 5000 persons. Ennore, Covelong, Mahalipooram and Sadras are villages of smaller extent, all situated on the coast.

Chingleput. — The town of Chingleput, the capital of the collectorate, where a zillah court is held, is 38 miles distant from Madras, in a south-west direction. It was formerly a place of some strength, and is still surrounded by a rampart and ditch, two miles in circumference; the former however is in a very bad state of repair, and the ditch is allowed to become dry in the hot season.

Fort. — The fort is situated in the northern extremity of a valley upwards of a mile broad, and is bounded on the eastern, and greater part of the northern faces, by an artificial lake two miles long and one broad, from which the ditch is supplied with water.

The fort is 400 yards in length, from north to south, and 280 in breadth, from east to west; it is divided into two parts by a rampart and ditch, the eastern is considerably elevated, and forms what is called the inner fort. The entire western face and part of the northern, are bounded by rice fields irrigated from the lake, the water of which is retained by an embankment 1000 yards in length, on the top of which runs the high road leading from Madras to the southward. Small, rocky and bare hills lie to the south and north of the fort, but the

country generally around is level and open, and a low and thin jungle occurs in some parts.

The town of Chingleput lies about half a mile to the south east of the fort, it consists almost entirely of one long street; at the same distance from the fort, is another small village named Nullam, both are tolerably clean and airy, and the Palaur river runs close by the latter.

The public buildings within the fort, are the jail, a place of arms, the hospital and the court house. One or two companies of sepoys stationed here are hutted on high ground, about a quarter of a mile to the south.

Salubrity of the Station.

The inhabitants in the neighbourhood, as well as the prisoners in the jail, have been generally remarkably exempt from disease, notwithstanding the proximity of the lake from which, when the water becomes low a strong odour arises, from the decay and decomposition of a great expanse of weeds in its bed; this however has not led to any epidemic disease during the last 15 years, either amongst the inhabitants or prisoners, although the jail is situated on the verge of the ditch of the fort, which is similarly circumstanced with the lake as to weeds, it being a swamp for two-thirds of the year.

Jail.

The jail is placed between the outer and inner walls of the fort, on the south side; the site is low and confined, and precludes a free circulation of air. It is however somewhat raised from the ground.

The building consists of two portions adjoining each other—one, the largest, is in the form of a parallelogram enclosing an area of 9 yards, by 15; it contains nine apartments varying from 15 feet by 39, to 15 by 17, with a verandah towards the area; it is a very old building formerly a cotton godown, and was converted into a jail in 1802, when the zillah court was established here. The other portion occupies two adjacent sides of a parallelogram, the opposite sides of which are the eastern part of

the first building, and a high wall on the south, forming an enclosure of 7 yards by 15; it has also a verandah, and contains four apartments of smaller dimensions.

From the situation of this jail the ventilation is imperfect, but the apartments are all kept very clean, and the place around is dry.

The system of dieting, clothing &c. of the prisoners, is detailed in the general statement, at the end of the report for the division.

Hospital. The hospital is situated within the fort, being a long range of building parallel to, and about 20 yards from the western rampart, which shuts it in on the rear; at the sides and in front, at a distance of 12 feet, it is enclosed by a brick wall 6 feet high. The building measures 37 yards by 12, is constructed of brick and chunam, pent roofed and tiled, and floored with brick, it is provided with a verandah in front and rear, and is well raised from the ground.

It is divided into 3 wards, and a dispensary, the wards have no direct communication with each other, they are all well ventilated by doors and windows, the latter of which are secured with iron bars and shutters, one of the wards is appropriated for the sick of the detachment of sepoys on duty here. In the same enclosure are two cells for insane patients, of 10 feet square.

Both jail and hospital are well supplied with good water.

Notwithstanding the objectionable site of the jail, and other causes of disease alluded to, such as exhalations arising from the tank and ditch during the day, succeeded by vicissitudes at night, which are always great in the immediate vicinity of marshes, the following tables for 10 years, shew but a very small amount of acute disease. The most fatal diseases have been *cholera* and *bowel complaints*, and the most numerous, *fevers, bowel complaints, eruptive diseases* and *diseases* of the *skin.*

JAIL OF CHINGLEPUT.

No. 12.—Table exhibiting the Number of Admissions and Deaths of the Convicted Prisoners, from each Class of Disease for 10 years.

CLASSES.	DISEASES.	1829 to 1838. Aggregate strength 1,887. 1st Half. Ad.	Dd.	2d Half. Ad	Dd	Admissions and Deaths from each class of disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each Class.	Total Deaths from each Class.	Average percentage of sick to strength.	Average percentage of deaths to sick.
Fevers......	Febris ephemera	25	0	34	0								
	„ intermittquot........	179	1	314	2	247	1	385	2	632	3	33 ·492	0 ·474
	„ tertiana	2	0	2	0								
	„ remittens...	1	0	0	0								
	„ continua....	40	0	35	0								
	Cholera.........	15	11	3	0	15	11	3	0	18	11	0 ·953	61 ·111
Diseases of the abdominal viscera.......	Diarrhœa.......	76	4	95	9								
	Dysenteria acuta et chronica.	30	4	56	6	221	9	271	15	492	24	26 ·073	4 ·878
	Obstipatio......	114	0	120	0								
	Peritonitis......	1	1	0	0								
	Hepatitis acuta et chronica...	1	0	3	0	1	0	3	0	4	0	0 ·211	0 ·0
Diseases of the Lungs and Heart.	Catarrhus......	20	1	20	0								
	Asthma........	1	0	1	0								
	Pneumonia.....	1	0	1	0								
	Phthisis pulmonalis.........	1	1	2	2	25	2	25	2	50	4	2 ·649	8 ·0
	Hœmoptysis....	1	0	0	0								
	Palpitatio.......	0	0	1	0								
	Dyspnœa.......	1	0	0	0								
Diseases of the Brain.	Epilepsia.......	7	0	5	0								
	Apoplexia..	1	1	0	0	12	1	12	1	24	2	1 ·271	8 ·333
	Paralysis.... ..	4	0	4	1								
	Mania..........	0	0	3	0								
Eruptive fevers......	Variola.........	0	0	8	1								
	Varicella...... ..	132	0	20	0	133	0	28	1	161	1	8 ·532	0 ·621
	Rubeola.........	1	0	0	0								
Dropsy.... ..	Anasarca.......	6	2	8	2	6	2	8	2	14	4	0 ·741	28 ·571
Rheumatic affections.	Rheumatismus acutus et chronicus.........	135	1	150	0	135	1	150	0	285	1	15 ·103	0 ·350
Venereal affections ..	Syphilis primitiva..........	11	0	4	0								
	Gonorrhœa.....	3	0	3	0	25	0	16	1	41	1	2 ·172	2 ·439
	Hernia Humoralis............	11	0	9	1								
Specific diseases.....	Atrophia........	7	1	1	1								
	Lepra...........	1	0	1	0	9	1	10	1	19	2	1 ·006	10 ·526
	Dracunculus....	0	0	1	0								
	Scrophula......	1	0	7	0								
Diseases of the eye...	Morbi Oculorum	20	0	34	0	20	0	34	0	54	0	2 ·861	0 ·0
do. of the skin.....	„ Cutis......	170	1	125	0	170	1	125	0	295	1	15 ·633	0 ·339
	Other diseases..	902	6	1048	2	902	6	1048	2	1950	8	103 ·338	0 ·410
	Total.......	1921	35	2118	27	1921	35	2118	27	4039	62	214 ·043	1 ·535

JAIL OF CHINGLEPUT.

No. 13—*Table exhibiting the Number of Admissions and Deaths, of the Prisoners under trial, from each Class of Disease, for 10 years.*

CLASSES.	DISEASES.	From 1829 to 1838. Aggregate strength 1,180 — 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions and Deaths from each class of disease. — 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each Class.	Total Deaths from each Class.	Average percentage of sick to strength.	Average percentage of deaths to sick.
Fevers......	Febris ephemera	0	0	0	0	25	2	26	3	51	5	4 ·322	9 ·803
	,, intermittens.	23	0	24	2								
	,, tertiana......	0	0	1	0								
	,, continua....	2	2	1	1								
	Cholera.........	2	0	0	0	2	0	0	0	2	0	0 ·169	0 ·0
Diseases of the abdominal viscera.	Diarrhœa..... ..	14	3	16	4	51	4	43	5	94	9	7 ·966	9 ·574
	Dysenteria acuta et chronica	10	1	5	0								
	Obstipatio......	27	0	22	1								
Diseases of the Lungs.	Catarrhus......	1	0	1	0	1	0	2	1	3	1	0 ·254	33 ·333
	Asthma..........	0	0	1	1								
Diseases of the Brain..	Epilepsia.......	0	0	2	0	0	0	2	0	2	0	0 ·169	0 ·0
Eruptive Fevers....	Variola,........	5	0	18	2	81	0	21	2	102	2	8 ·644	1 ·960
	Varicella.......	76	0	2	0								
	Erysipelas......	0	0	1	0								
Dropsy.....	Anasarca.......	1	1	1	0	1	1	1	0	2	1	0 ·169	50 ·0
Rheumatic affections...	Rheumatismus acutus et chronicus..........	15	0	8	0	15	0	8	0	23	0	1 ·949	0 ·0
Venereal affections...	Syphilis primitiva...........	6	0	6	1	6	0	6	1	12	1	1 ·016	8 ·333
Specific diseases......	Lepra..........	0	0	2	1	1	0	2	1	3	1	0 ·254	33 ·333
	Dracunculus,...	1	0	0	0								
Diseases of the Eye..	Morbi Oculorum	3	0	0	0	3	0	0	0	3	0	0 ·254	0 ·0
Diseases of the Skin..	,, Cutis......	94	0	52	0	94	0	52	0	146	0	12 ·372	0 ·0
	Other diseases..	125	0	87	2	125	0	87	2	212	2	17 ·966	0 ·943
	Total....	405	7	250	15	405	7	250	15	655	22	55 ·508	3 ·358

Remarks on the preceding tables of Disease.

The average annual strength of the convicted prisoners, has been 188, and the annual admissions averaged during the same time, 208; the mortality exclusive of cholera being 5 annually. The average was not materially increased during the year of famine, (1833) either in this class of prisoners, or amongst those waiting for trial,

as in the other jails in the division; a sufficient supply of food having been sent to Chingleput from Madras, causing great numbers of people to resort thither. The table for those under trial exhibits but little disease, and the number of prisoners under this head, is less than in the other jails.

The most frequent diseases have been *fevers, bowel complaints, eruptive diseases,* and *diseases* of the *skin.*

Fever. - The cases of fever have generally been of a mild description, seldom requiring more than an emetic and purgative for their cure, and the few which resisted these simple means, generally yielded to the sulphate of quinine. The mortality attending every species of this disease, during the ten years, has not exceeded ½ per cent on the number treated, a sufficient proof of their mild and tractable nature.

Diarrhœa and Dysentery. Diarrhœa and dysentery have always been diseases of frequent occurrence in the Chingleput jail, attributable and apparently correctly, to the confined and ill ventilated state of the building; for since 1833, at which time the ventilation was considerably improved, these diseases have been comparatively less frequent; thus during the first five years of the period embraced in these remarks, viz. from 1829 to 1833 inclusive, 178 cases, with 12 deaths occurred; while from 1834 to 1838 inclusive, only 80 cases, with 11 deaths have taken place; and including the cases of these diseases amongst the class of untried prisoners, or waiting for trial, during the same period, we have for the first, 216 admissions, with 20 deaths, and during the second, 82 cases, with 11 deaths. But though these diseases are much diminished in point of number, the ratio of mortality still attending them keeps fully as great as formerly, being 13½ per cent; and it may here be remarked, that the amount of febrile disease is found to be much the same, in both periods.

The foregoing statement also shews that, exclusive of deaths

from cholera, nearly one half of all the mortality has been caused by bowel complaints. The treatment during the greater part of the time consisted in the employment of ipecacuanha with powdered gum acacia, occasionally combined with opium and blue pill.

Cholera. The cases of cholera all occurred in 1833, except three, which took place in 1838.

Eruptive Diseases. Eruptive fevers form a considerable number of the admissions, in both classes of prisoners, these diseases occurred in the years 1830, 33, 34 and 1835, and almost exclusively in the first half of each year. Of modified small pox and varicella, 230 admissions have taken place, without one casualty, and of variola 31 cases, with three deaths. The vaccine establishment of this zillah appears to be carefully attended to by the medical officer in charge, a vaccinator being stationed in each talook.

The following interesting case of accident, which occurred at Chingleput in 1837, is worthy of record, as shewing the extent of injury from which natives of India occasionally recover.

A ryot aged about 30, was admitted into the jail hospital on the evening of the 30th September at 7 P. M., having been brought from a village 10 miles distant from Chingleput, where six hours previously he had been wounded in the abdomen by a cow goring him ; a great part of the small intestines were protruding from the wound, which a native doctor had been attempting to reduce or return,for nearly two hours before bringing him to the hospital. The wound was in the right iliac region, a little above the passage of the spermatic cord, into which the little finger of the left hand was introduced with some difficulty, when it was enlarged upwards, fully half an inch with a probe pointed bistoury,more intestine immediately rushed out, but the whole was replaced by gentle manipulation, and the wound closed with three sutures. The

patient went on very well for six days, but becoming tired of lying in the same posture, he got up and walked about, by which imprudence the wound was torn open ; the parts then sloughed, and the peritoneal covering of the intestine became inflamed, the abdomen swelled, the stools and urine were passed involuntarily, and the patient became delirious and frequently tore off the dressings. The wound was again closed with adhesive straps, poultices and fomentations were applied to the abdomen, and opiates given both by the mouth, and in enemata—the other constitutional treatment was well directed and modified as required, mercury, quinine and diffusible stimulants having been employed from time to time. The patient rallied and recovered, and was discharged quite well on the 17th November following.

WALLAJAHBAD.

Situation and description of

The military station of Wallajahbad is situated about 40 miles south-west from Madras, and 30 miles inland from the coast at Sadras; in latitude 12° 58″ north, and longitude 79° 39″ east.

The site of the cantonment is on a piece of ground gently rising above the surrounding plain, though not many feet above the level of the sea. It is three quarters of a mile in length running south-east, and nearly half a mile in breadth ; the Palar river is about 500 yards distant to the south. A large tank called Tinnerey lies on the north side, and the populous town of Conjeveram on the west, distant between 6 and 7 miles. Several small hills of granite lie between it and the sea coast, the nearest being distant two miles and a half, and the highest not more than 500 feet above the level of the sea ; these hills are perfectly bare, and devoid of all vegetation.

Palar river.

The river Palar, as has been already mentioned, rises in the Nundidroog hills in Mysore, taking

in the first part of its course a southerly direction, but through this part of the country, from Conjeveram to the sea at Sadras, it runs nearly in a straight line. Its bed is sandy, and for about eight months of the year nearly dry; during the rains it presents a surface of water of 500 yards in breadth, which however on subsiding leaves but little slime or deposit, likely to be productive of malarious disease. Water courses are opened on both sides, for the irrigation of the land in its vicinity. Close to and parallel with the left bank of the river, is a streamlet which contains running water throughout the year, being supplied from springs; from it the cantonment and also the village are abundantly furnished with drinking water; there are also numerous good wells in the cantonment, generally sunk in sandy or gravelly beds.

Water.

Village. The village of Wallajahbad lies to the south-east of the cantonment, half a mile distant, and consists principally of one street running east and west; from its vicinity to the river, and there being a considerable nullah passing through it, the town is well drained, and is tolerably clean, airy and dry.

Soil and produce. The soil in the immediate neighbourhood, is sandy, mixed with a marly clay, with here and there granite rocks interspersed, and the country for several miles round is partially covered by a thin stunted jungle, occasional clear patches of land intervening in which cholum, baujera and wuragoo are grown. Near the cantonment, especially on the north side, are several extensive paddy fields, watered from the large tank formerly mentioned, and besides these there is but little vegetation round the station, excepting a few straggling palmiras, and tamarind trees.

Climate. The climate, as to temperature, differs very little from that of Madras, though it is generally reckoned to be somewhat higher; both places are under the influence of the

same monsoons, and the distance of Wallajahbad from the coast is not so great as to prevent the sea breeze from reaching it. In the months of January, February and March fogs prevail, but are not found to be unhealthy.

Formerly one of Her Majesty's regiments, with one or two native corps, were stationed at Wallajahbad, but now, the only troops are the head quarters of a Native Veteran Battalion, the Drum boy establishment, and details of native sick arriving from the eastern settlements.

Barracks. The European barracks, or at least what now remains of them, are occupied by the Veteran Battalion, and the Drum boy establishment, and the sick have ample accommodation in a part of what was formerly the European hospital.

During the period Her Majesty's troops were stationed here, the amount of disease was generally very great, and the vast mortality which occurred, obtained for Wallajahbad the unhappy name of, "the grave of Europeans."

Nothing can now be observed in the site of the cantonment or surrounding country, which can be looked upon as productive of the great extent of sickness which prevailed in the Royals, and Her Majesty's 30th regiment, in the years 1807, and 1808, shown in the following statement.

No. 14.—*A tabular view of the Sickness at Wallajahbad from 1st January 1807, to 31st October 1808, in Her Majesty's 30th Regiment, and 2d Battalion of the Royals.*

	1807.		1808.		1 year and 10 months.			
	Number of Sick.	Number of Deaths.	Number of Sick.	Number of Deaths.	Total number of Sick.	Total number of Deaths.	Average per centage of Sick to Strength.	Average per centage of deaths to sick.
Fever	137	11	440	15	577	26	30·146	4·506
Dysentery	689	74	973	75	1662	149	86·833	8·965
Hepatitis	5	1	29	3	34	4	1·776	11·764
Jaundice	3	0	0	0	3	0	0.155	0·000
Rheumatism	3	0	44	1	47	1	2·445	2·127
Pleurisy	0	0	0	0	0	0	0·090	0·000
Dropsy	0	0	10	1	10	1	0·522	10·000
Ulcers	58	0	290	16	348	16	18·181	4·597
Venereal	13	0	193	8	206	8	10·762	3·883
Other diseases	193	9	142	3	335	12	17·502	3·582
Total	1101	95	2121	122	3222	217	168·338	6·734
Effective Strength	927		987		1914			

Percentage of Deaths to Strength during this period has been 11·337.

The site of the barracks is low, they are built in the form of a square closed on all sides, with a gateway to the north; the walls are of brick and mud, having pent and tiled roofs, with a verandah on the inner side, reaching to within six or seven feet of the ground; the floors are not raised, and in some parts of the building, they are even below the surrounding level. The only means of ventilation is by doors and windows, both of which are unprovided with venetians.

The cold wet floors during the monsoon, and imperfect ventilation, are alone considered as amply sufficient to produce dysenteric affections, and low typhoid fevers, the diseases which principally occasioned the great mortality amongst the European troops, at the time above mentioned. This opinion is confirmed by that of medical officers of the greatest experience; the following is an extract from a report by a late Superintending Surgeon on these barracks, viz. "the only cause (of the sickness) that can be imagined, "is the great defect in the public buildings, the floors are "too low, even lower than the surface of the surround-

" ing ground,and those of the officer's quarters are considerably " below the surface, and actually require a cut or drain all " round to prevent water running into the apartments."

The reports from Medical officers during the last 15 years, are invariably favorable, and bear testimony to the healthiness of the place, for the native troops, and for the inhabitants generally.

A tabular view of the principal diseases with the mortality, is given both for the Drum establishment composed of Indo-britons, and for the 2nd Native Veteran Battalion, in the absence of other data, no troops of the line European or Native, having been stationed at Wallajahbad for several years past; the conclusions to be drawn from them, are however, not so satisfactory as could be desired.

DRUM BOY ESTABLISHMENT.

No. 15.—*Table exhibiting the Number of Admissions and Deaths from principal Diseases for 6 years.*

CLASSES.	DISEASES.	From 1833 to 1838. Aggregate strength 686. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions and Deaths from each Class of discase. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Average percentage of sick to strength.	Average percentage of deaths to sick.
Fevers......	Febris ephemera	40	0	80	0	57	0	144	2	201	2	29 ·300	0 ·995
	,, intermittent.	13	0	41	1								
	,, remittens....	4	0	23	1								
	Cholera.........	10	3	1	1	10	3	1	1	11	4	1 ·603	36 ·363
Diseases of the Abdominal viscera......	Diarrhœa.......	37	0	57	0	42	2	70	0	112	2	16 ·326	1 ·785
	Dysenteria acuta et chronica.	5	2	13	0	2	0	2	0	4	0	0 ·583	0 ·0
	Hepatitis acuta et chronica...	2	0	2	0								
Do. of the Lungs......	Catarrhus......	4	0	19	0	6	0	24	0	30	0	4 ·373	0 ·0
	Pneumonia.....	2	0	5	0								
Rheumatic affections.	Rheumatismus acutus et chronicus.........	17	0	7	0	17	0	7	0	24	0	3 ·498	0 ·0
	Other diseases.	507	2	522	0	507	2	522	0	1029*	2	150 ·0	0 ·194
	Total...	641	7	770	3	641	7	770	3	1411	10	205 ·685	0 ·708

* Four fifths of these cases were scabies and slight ulcers.

2D. N. V. B. WALLAJAHBAD.

No. 16.—*Table exhibiting the Number of Admissions and Deaths, from principal Diseases, for* 6 *years.*

CLASSES.	DISEASES.	1833 and 1838. Aggregate Strength 5,455. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions & Deaths from each Class of Disease. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each Class.	Total Deaths from each Class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
Fevers......	Febris ephemera	31	0	27	0								
	,, intermit: quot	107	4	223	9								
	,, tertiana......	22	1	39	0	193	6	329	13	522	19	9 ·569	3 ·639
	,, remittens....	32	1	35	3								
	,, continua.....	1	0	5	1								
	Cholera.........	23	11	8	6	23	11	8	6	31	17	0 ·568	54 ·836
Diseases of the Abdominal viscera......	Diarrhœa	35	3	39	4								
	Dysenteria acuta et chronica..	12	2	17	4	47	5	56	8	103	13	1 ·888	12 ·621
	Hepatitis acuta et chronica...	2	1	0	0	2	1	0	0	2	1	0 ·036	50 ·0
Diseases of the Lungs.	Catarrhus.......	10	3	11	1								
	Asthma..	6	2	8	0								
	Phthisis pulmonalis..........	0	0	1	1	20	7	24	4	44	11	0 ·806	25 ·0
	Hœmoptysis....	0	0	1	0								
	Pneumonia.....	4	2	3	2								
Rheumatic affections.	Rheumatismus acutus et chronicus.	78	5	49	1	78	5	49	1	127	6	2 ·328	4 ·724
	Other diseases..	378	18	291	20	378	18	291	20	669	38	12 ·263	5 ·680
	Total....	741	53	757	52	741	53	757	52	1498	105	27 ·461	7 ·009

PALAVERAM.

Situation and general discription.

The cantonment of Palaveram, or as it is also called the Presidency cantonment, lies three miles south of St. Thomas's mount, situated close to the western side of the Palaveram range of hills, and four or five miles in a direct line from the coast. The cantonment which is exclusively for native troops, extends upwards of a mile in length, and about half a mile in breadth, and is laid out for four regiments of infantry.

The range of hills extends the whole length of the cantonment, which is disposed in the following manner, the officers

houses are close to the hills in four rows, intersected by four cross streets ; in the first row are the quarters of the commanding, and field officers ; in the second and third, those of the captains, and in the fourth are the houses of the subalterns. An open parade ground of 300 yards in breadth, extends from the officers lines to the barracks, which are four in number and in a line with each other, the main guard, a two storied building, being in the centre ; the barracks or places of arms are equi-distant, and about two hundred paces apart.

At a short distance in rear of the barracks is a space of ground 200 yards in breadth, allotted for the huts of the men, and somewhat more distant are the hospitals, which are also four in number, and in a line with each other, each being flanked by the serjeants quarters, and the regimental store rooms. The solitary cells are placed near the main-guard.

Officers houses. The officers houses are well built, constructed of brick and chunam, a few of them have terraced roofs, they are generally however tiled, and for the most part raised a few feet from the ground. The rents are moderate, and the houses are sufficiently commodious.

Barracks and Hospitals. The Barracks and hospitals are very substantial buildings, with arched roofs, and granite floors. Each hospital consists of one long ward, 99 feet by 18 feet, calculated to contain 50 patients. They are provided with verandahs in front and rear, the ends being enclosed so as to form four small apartments, which serve as a dispensary, surgery, store-room, and bath-room. The walls and arched roofs of these buildings are of solid masonry, and the floors are raised 3 feet from the ground. They have 3 doors on each side, and two at each end, with ventilators above the latter ; in the rear there is a cookroom and a privy ; these hospitals appear perfect in every respect, with the exception of their not having venetians to the doors, and not being surrounded by a wall.

The ground, from the base of the hills, slopes gently in the direction of the barracks and hospitals, which are well drained, there being a separate drain round each building, leading to three main channels which run into the Adyar, distant 300 yards in the rear. The stream however at this place, is, from the level nature of the country, very sluggish, and in the monsoon season the buildings are under water, the ground being swampy nearly up to the officers houses, and the huts of the men have occasionally been washed down. In place therefore of being hutted in the locality described, lines have been erected for them near the bazaar, to the right of the cantonment, about half a mile from the nearest barracks, where the ground is higher.

The present lines as also the bazaar, are kept remarkably clean and dry.

There have been seldom more than two regiments stationed at Palaveram for several years past, and frequently only one, but formerly the number was kept complete to garrison Fort St. George, for which purpose one regiment was sent down to Madras monthly.

The place has generally been found to be very healthy, for although the hills shut out the sea breeze in a considerable degree, from the houses more immediately in their vicinity, those more distant enjoy it partially, as the wind passes through an opening in the centre of the range, and also round its southern extremity.

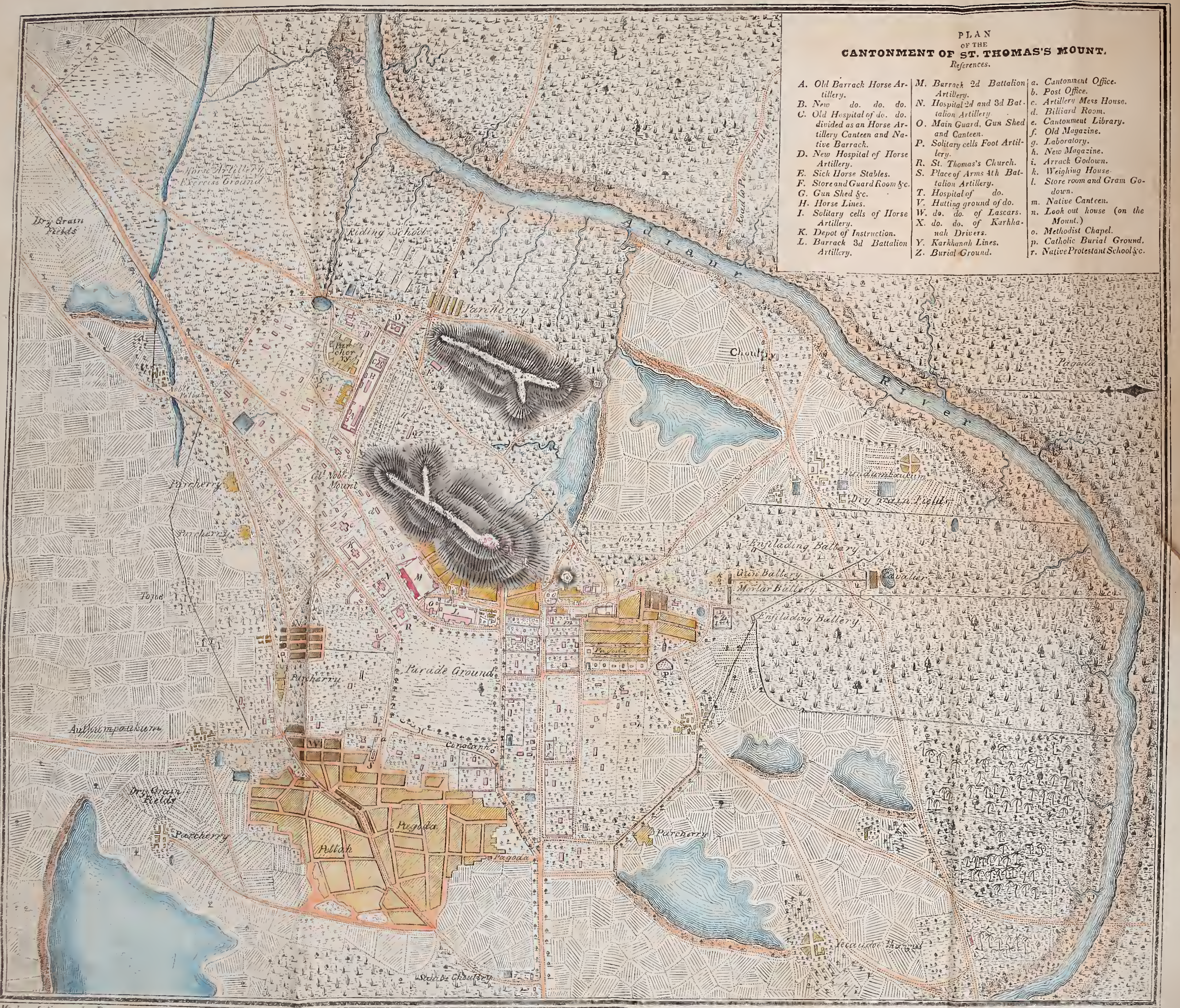
Soil. Near the hill the soil is composed of the disintegrated rock, consisting of green stone, gneiss and coarse sand stone ; at a little distance it becomes sandy, and laterite is found near the surface. There is but little cultivation in the immediate neighbourhood, and for some distance around the country is quite clear of jungle, with the exception of a few scattered cocoanut and palmira trees; the can-

Water. tonment is well supplied with pure and wholesome water, there being good wells in almost every compound.

The native troops stationed here have been remarkably healthy, as shown by the following table of disease for five years—

No. 17.—*Table exhibiting the Number of Admissions and Deaths, from the more important Classes of Disease, for 5 years.*

CLASSES	DISEASES.	Aggregate strength 3,961. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions & deaths from each class of Disease. 1st Half. Ad.	1st Half. Dd.	2d Half Ad.	2d Half Dd.	Total admissions from each class.	Total deaths from each class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
Fevers......	Febris ephemera	125	0	209	0	225	4	317	3	542	7	13 ·683	1 ·291
	„ intermit. quot	63	1	70	0								
	„ tertiana	13	0	6	0								
	„ remittens ...	8	1	12	2								
	„ continua....	16	2	20	1								
	Cholera........	0	0	1	0	0	0	1	0	1	0	0 ·025	0 ·0
Diseases of the abdominal viscera.......	Diarrhœa	11	0	23	0	24	1	53	0	77	1	1 ·943	1 ·298
	Dysenteria acuta et chronica.	13	1	30	0								
	Hepatitis acuta et chronica...	5	1	1	0	5	1	1	0	6	1	0 ·151	16 ·666
Diseases of the Lungs & Heart.	Catarrhus...	12	0	13	0	27	3	28	2	55	5	1 ·358	9 ·090
	Asthma..........	8	0	9	0								
	Phthisis pulmonalis	6	3	3	2								
	Hœmoptysis	1	0	0	0								
	Pleuritis.........	0	0	0	0								
	Pneumonia.....	0	0	1	0								
	Carditis	0	0	0	0								
	Palpitatio.......	0	0	0	0								
	Dyspnœa......,	0	0	2	0								
Rheumatic affections.	Rheumat. acutus et chronicus	119	3	100	0	119	3	100	0	219	3	5 ·528	1 ·369
	Other diseases..	909	8	750	6	909	8	750	6	1659	14	41 883	0 ·843
	Total....	1309	20	1250	11	1309	20	1250	11	2559	31	64 ·604	1 ·211



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B.C. Regel. Delt.

CANTONMENT OF SAINT THOMAS'S MOUNT.

St. Thomas's Mount the principal station of the Madras Artillery, and the head quarters of this arm of the force, is situated 8 miles west of fort St. George, and about four or five in a direct line from the sea, and enjoys from its position many important advantages; the cantonment is laid out at the base of the eastern, and southern sides of the hill from which it takes its name, and occupies a surface of 750 square acres; the barracks and most of the public buildings have an eastern aspect, and are open to the genial influence of the sea breeze.

Soil. The soil on which the cantonment stands, principally consists of red clay and gravel, and much of the neighbouring lands is under rice cultivation.

Roads. From Marmalong bridge, distant about two miles east, and which may be styled the portal of the Mount, the approach is by a gentle ascent, the road on each side being lined by rows of the "Ficus Indica" or banian tree, forming a beautiful and well preserved avenue, which affords a refreshing, and pleasant shade from the mid-day sun, this road the continuation of which leads from the Mount to Palaveram, is at all times kept in excellent order.

Adyar River. The Adyar river, which in the monsoon season forms a considerable body of water, runs at the distance of one mile north of the Mount, and like most other Indian streams becomes almost dry in the hot season.

Tanks. There are numerous tanks scattered over the face of the adjacent country, from which the lands under cultivation are irrigated, but there are no marshes or lodgements of water near the cantonment, likely to generate noxious exhalations.

The Mount hill. A small range of buildings and a chapel, belonging to the roman catholic clergy of Goa, occupy the summit of the Mount, where according to tradition the remains of Saint Thomas are interred. The hill is almost entirely composed of greenstone and syenite, the former of which is most abundant; it rises to its greatest height, 340 feet above the level of the sea, at the northern extremity, the eastern side being the most precipitous, particularly at a part where the greenstone rock is somewhat columnar; the slope is more gradual on the north-west and south-sides, which are covered with a thin coarse grass, and a small prickly shrub affording pasture for goats.

From the highest point, the hill slopes gently towards the south, masses of greenstone rock appearing here and there.

The syenite is well adapted for architectural purposes, and where the proportion of felspar in it is large, it is capable of taking a good polish, and is frequently used for ornamental purposes. The greenstone of the Mount is also used for building, and for road making, for which latter purpose it is found to be one the best materials procurable.

Officers houses. The Officers houses are substantially built, many of them consist of two stories, and are terraced, they are generally placed in neatly laid out gardens, and the compounds are surrounded by fences made of the milk hedge, (or Euphorbium Tirucalli) occasionally interspersed with bamboo.

Rare fruit trees. It may not be considered out of place to notice a rare shrub, named the Sapodilla, which is found in one of the gardens here, as well as in the Government garden at Guindy, and which was originally brought to India by an officer of the artillery from Java. It attains a height of form 10 to 12 feet, resembles a small mangoe-tree, and bears a wholesome fruit of an oval form, which has the flavour when ripe of a medlar, or decayed pear; it is a native of the Cœlebes, and of some other Islands in the eastern archipelago.

The Adansonia digitata, or sour gourd, a beautiful and somewhat rare tree, is also found at the Mount, it is a native of Senegal, and remarkable not only for the size of its stem as compared with its height, but also as being the largest known tree. In one specimen at the Mount, the circumference of the trunk is 30 feet, but trees have been met with by travellers, measuring from 90 to 100 feet in girth. As its name implies, it was first introduced to notice by Dr. Adanson, it is chiefly an ornamental tree, but its fruit is occasionally used by natives in curries. It belongs to the same natural order as the cotton tree.

Climate. The climate of St. Thomas's Mount differs in no material respect from that of Madras, with the exception that in the hot season, the temperature is two or three degrees higher.

European foot Artillery Barracks. The barracks of the Foot Artillery, two in number, are placed at the bottom of the hill, and run in a direct line. north and south, being freely open as before mentioned, to the influence of the sea breeze; they are calculated for two Battalions, and afford accommodation for 700 men. They consist of a separate range for each battalion, substantially built of brick and chunam, and floored with granite; each barrack is 130 yards long, by 16 wide, and 12 feet in height, and they are well ventilated by means of venetianed doors, and windows. The main guard lies between these two barracks.

Serjeant's quarters. The Serjeants rooms are 12 feet square, with a verandah 6 feet wide.

In the rear of the barracks spaces of ground are appropriated for parades, for skittle sheds, a racket, or fives court and for a library.

Offices. The cookrooms and other offices, are situated at a convenient distance from the other parts of the buildings,

and the drains from them are kept perfectly clean, and free from accumulations.

Wells. There is a well for each barrack, one contains good water, but the other is somewhat brackish ; a well in the parcherry also affords a supply of excellent water for the use of the soldiers families.

The Parcherry. The parcherries consist of streets of small houses on the base and sides of the hill, the residences of married men, or others who have families, and who are allowed the indulgence of living out of barracks.

Congee houses. The congee houses, or places of temporary confinement, are placed in rear of the private parade ground, they are built of brick and chunam, are 6 yards square, and 12 feet in height, having a sky light, and three windoors each, with a necessary ; they seem ill calculated to answer the purposes of punishment, several men being frequently confined in them at one time.

European Horse Artillery Barracks. There are three Barracks for the Horse Artillery, situated on the southern side of the Mount, built of brick and chunam. One is 228 feet in length, and 16 in breadth, with verandahs in front and rear 9½ feet broad ; it is a well ventilated building, and attached to it are rooms for the serjeants, 20 feet by 10, with convenient out houses. Another is a new bomb proof building, in excellent order, lofty and well ventilated, it is not however so cool as that building last mentioned, it consists of one room 156 feet long, and 37½ broad, there is a small front verandah 37 feet by 10, and a rear one of only 13 feet in length. It can accommodate 104 men with comfort, with a single row of bedsteads all round, but the number might if requisite be increased to 130. The unmarried men of the Horse Artillery usually occupy this apartment, the saddles and harness belonging to the troop are hung immediately

over the men's beds, and the leather when newly greased, emits a very unpleasant smell; the free circulation of air is also impeded, and the harness is a receptacle for insects, it has not however appeared to be detrimental to the health of the inmates. There is a row of small windows round the building, close to the roof, which conduces greatly to the free circulation of air. At one end of this barrack there are a few small buildings for the use of the serjeants of the troop.

The third barrack can accommodate 104 men comfortably, it is at present occupied by details of native Horse Artillery.

Hospital. The Hospital is situated at the distance of about 80 yards from the line of barracks, it is a bomb-proof building of a square form, and is capable of accommodating 28 men—and on emergency could be made to contain 40 cots.

Cots, and bedding. Each European recruit is supplied on his first arrival in the country, with the following articles of bedding, viz. a cotton carpet 6 feet long and 3 wide, which is afterwards kept up at his own expence; also biennially with a cotton quilt 7⅓ feet long, by 4⅓ broad, stuffed with 2 lbs of cotton; the cots in use are of iron, and are 6 feet 2 inches long, by 3 feet broad; they are removed once a week into the square, for the purpose of the barracks being thoroughly cleared out, when the floors are swept, washed and scrubbed.

Diet of the soldiers. The diet of the soldiers is as follows,

Dinner	on Sunday,......	*Beef,*	Thursday... ..	*Beef,*
do.	,, Monday,..	*Mutton,*	Friday,........	*Mutton,*
do.	,, Tuesday......	*Beef,*	Saturday,......	*Pork,*
do.	,, Wednesday....	*Mutton,*		

with either tea or coffee, cowheels, sausages, eggs, fish, butter and hoppers for breakfast; and those who desire it can have an equally substantial supper.

The provisions are good and wholesome, and are regularly

inspected by a committee of non-commissioned officers and men, before being served out.

Solitary cells. The solitary cells situated about three-quarters of a mile from the centre of the cantonment, are small square puckah buildings ten in number, each 8 feet square, having a small part divided off for the purpose of washing, they are ventilated by means of windows at the top, which afford a partial light, and they are thoroughly cleaned out every morning.

Effects of solitary confinement on health. The effects of prolonged solitary confinement appear to be debilitating in the extreme, and men confined for any length of time lose flesh, the appetite fails, ordinary food is nauseated, the bowels become torpid and rheumatic pains are complained of; on being released they appear listless, gloomy and indifferent to every thing, and are generally either received into hospital, or kept on the convalescent list for some weeks unfit for duty. This however was the result of the punishment, under the former mode of carrying it into effect, when the diet and confinement were rigorous in the extreme.

Improved system of carrying the punishment into effect. Of late Medical Officers have been allowed to order such moderate increase of diet as may be requisite for the preservation of the prisoners health, and in place of lengthened periods of solitary imprisonment, extending from one to twelve months, the present system only allows every alternate month to be solitary.

Every man sentenced by a general court martial to be confined for a longer period than six weeks, is from the first allowed a pint and a half of good mutton broth daily, in addition to a pound and a half of bread, besides conjee water as drink; and is permitted to take exercise near his cell for an hour every morning, in the presence of a non-commissioned officer. That this system which has been in operation but a

short time, will work well, and that the prisoners will sooner be able to return to duty after confinement, there is every reason to expect.

The men in the cells, besides being visited by their company officers, are seen by the surgeon daily, and when sick are always removed into hospital.

Cantonment Hospital. The cantonment hospital is eligibly situated near the barracks, and is raised $5\frac{1}{2}$ feet from the ground, it enjoys a free circulation of air though surrounded by an outer wall.

There are two principal wards, and in the event of increased numbers of sick, the enclosed verandahs may likewise be occupied, but under ordinary circumstances the hospital is quite sufficient for the sick of the cantonment, and of a Battalion of Artillery, being capable of containing 36 cots at the distance of three feet a part; there are also two closets for cases requiring seclusion, a surgery, store rooms and dead room, as well as a ward for women and children.

The wards are cleaned out and washed once a week, as an established rule, and oftener if necessary.

The drains from the building are kept in good repair, and all obstructions removed.

Such men as are able, are permitted to take exercise in the cool of the morning and evening, on the terraced roof of the hospital, and others walk outside under the care of a non-commissioned officer, or are sent out in doolies. There is a convalescent list, but no convalescent ward.

Diet of the Sick. The diet for the European sick is provided by the Commissariat Department, a conicopoly being attached to the hospital, and the medical officer inspects the quality of the provisions, and can order any particular article of diet requisite for the patients.

Lines of the Native Foot Artillery. The lines of the Golundauze, or Native Foot Artillery, are situated on the south side of the cantonment, the men are comfortably hutted, and the lines are perfectly clean and dry.

Native Hospital. The native hospital is placed on an elevated, and open part of the cantonment, within a convenient distance of the Golundauze lines, and is built of brick and chunam. It can conveniently hold from 25 to 35 cots, and is appropriated for the reception of the sick of the native battalion, likewise for those of the establishment of gun lascars, and bullock drivers, and all authorized public followers who apply for medical assistance.

Prevailing Diseases. The prevailing diseases among the European soldiers at the station, are principally *fever*, *dysentery*, and *liver complaints*. *See tables of disease appended.*

Hot Season. The hot season is by no means the most unhealthy period of the year, as might at first be supposed, the barracks are provided with tatties during the land wind, and the men are not allowed to go out from 10 A. M., till 4 P. M.; every indulgence however, consistent with health and discipline, is shewn them.

Amusements. A library is attached to each battalion, with a reading room and coffee room, and inducements are held out to the uneducated to attend the regimental schools. The games of cricket, long bullets, bowls and fives are encouraged, and the men are permitted to bathe in the Adyar at proper hours.

Were it not for the use of Arrack, and other more deleterious spirits, in which so many indulge to excess, the life of the soldier in India would not only be prolonged, but likewise rendered more happy than at present, but the abuse of stimulants of various kinds leads to other vices, which though slowly yet surely, undermine both his health and happiness.

The effects of the north-east monsoon, on the health of the troops.

The north-east monsoon is more particularly the period of the year when the hospitals become filled, but whether this is owing to miasmata generated in the heavy rains, or to some other cause, is uncertain, but such is the fact, and the more grave and fatal forms of disease are most rife between October and January.

Health of the Wives and Children of the Soldiers

The wives and children of the soldiers also suffer much from disease, and it is a common and true remark, that the latter seldom attain to adult age in this climate, and such of them who do, never present the robust muscular frame of their parents, but assimilate more in appearance and character to the Eurasian; this effect though chiefly attributable to climate and imprudent exposure, is no doubt partly owing to improper diet, but whatever the causes may be, the degeneracy is but too obvious.

Births Marriages and Deaths.

Subjoined are tables of births, marriages and deaths, made out as correctly as circumstances allow, but the number of deaths in children cannot be accurately ascertained, from many not having been registered.

Table of Marriages, Births, and Deaths in the Cantonment of Saint Thomas's Mount, for Six years, ending in 1836.

	European Protestants.						European Catholics.						Total Europeans.	Native Protestants.						Native Catholics.						Total Natives.
	1831.	1832.	1833.	1834.	18 5.	1836.	1831.	1832.	1833.	1834	1835.	1836.		1831.	1832.	1833.	1834.	1835.	1836.	183 .	1832.	1833.	1834.	1835.	1836.	
Marriages	30	33	25	26	30	30	4	2	3	5	5	3	196	0	2	3	0	3	0				Not obtainable.			
Births. Legitimate. Male.	11	28	28	41	40	16	6	5	4	10	7	5	201	2	1	1	0	2	3							
Births. Legitimate. Female.	8	18	30	32	27	15	15	7	5	5	6	4	172	4	1	2	1	0	1							
Births. Illegitimate. Male.	0	0	0	1	1	0	1	0	0	1	1	0	5	0	0	1	1	1	0							
Births. Illegitimate. Female.	0	0	0	0	2	1	1	0	0	0	0	0	4	0	1	1	0	0	0							
Total Births	19	46	58	74	70	32	23	12	9	16	14	9	382	6	3	5	2	3	4							
Deaths. Men.	15	7	7	10	5	4	0	0	0	0	0	0	48	0	2	1	2	0	0							
Deaths. Women.	5	6	6	4	6	7	1	0	0	0	0	0	35	2	3	1	2	2	4							
Deaths. Children. Under Six months.	1	5	7	4	6	8	1	1	0	1	0	0	34	0	0	0	2	1	0							
Deaths. Children. From 6 months to one year.	3	3	3	3	6	8	1	2	0	0	0	0	24	0	0	0	0	0	0							
Deaths. Children. From 1 year to 3 years.	4	2	5	3	11	7	2	1	0	1	0	0	30	0	0	0	0	0	0							
Deaths. Children. Above 3 years.	7	4	7	3	5	1	0	1	0	0	0	0	28	0	0	0	0	0	0							
Total Deaths	35	27	35	27	39	30	5	5	0	2	0	0	205	2	5	2	6	3	4							

Health of the European Officers and their families.

Only two deaths have occurred amongst the officers, during a period of five years ending in December 1836, neither of which were attributable to climate; one being the consequence of prolonged intemperate habits, and the other of a general breaking up of the constitution; in the same period no death occurred amongst the officers' wives; and only two officers' children died, both from dentition.

Native Population.

The native population of the Mount and its immediate vicinity in 1837, was 17,720, the following being the proportions of each caste respectively.

Mussulmans	3,500
Gentoos	3,200
Malabar	4,520
Pariahs	6,500

Epidemic Diseases.

No epidemic has prevailed of late years; small pox is but rarely met with in the neighbouring district, vaccination being very generally kept up, and the prejudices of the people against this prophylatic, appear to be fast giving way. Cholera seldom makes its appearance, and then only in a sporadic form. The chief diseases from which the people appear to suffer are *fever* of various types, *dysentery, diarrhœa, pulmonary complaints, scrofula, leprosy* and other *cutaneous diseases, cachexia* and *syphilis*. For the diseases of the native soldiery, *see tables appended.*

Epizooties.

Horses.

In the B Troop of Horse Artillery at this station, there have been admitted into the Veterinary hospital from 1st February 1835, to 30th October 1836, 223 horses, and out of that number only 26 have been affected with acute diseases, viz.

	Deaths.
1 Dysentery	0
2 Catarrh	0
19 Gripes	1

1 Fever	0
1 Inflammation of Kidneys, Lungs, and Bronchia	1
1 Liver disease	1
1 Ruptured Intestine	1
Total 26	4 Deaths.

The remaining 197, were cases of accidents, bruises, mange, &c. so that the mortality would appear to have borne but a very small proportion to the total number. This healthy state of the troop horses is owing to the excellent system of management in use, attention to food, regular exercise, &c.

Bullocks. The bullocks employed for the foot Artillery guns are subject to various diseases such as, affections of the *liver*, *cowpox*, *tympanitic swelling* of the *belly*, *dysentery*, *bloody urine* and *dyspnœa*.

Great care is taken of these useful animals; they are received into the Artillery at six or seven years of age, and continue fit for work for eight or ten years.

Dogs. Hydrophobia seldom occurs at the station, all dogs found prowling out of doors in the hot season being destroyed; worms and dysentery are very often met with in dogs, and the distemper so called, is likewise at times very prevalent amongst them, particularly in those of the European breed.

EUROPEAN HORSE ARTILLERY.

No. 18.—*Table exhibiting the number of Admissions and Deaths, from the principal Classes of disease, from* 1829 *to* 1838, *exclusive of the year* 1831.

CLASSES.	DISEASES.	1829 to 1838. Aggregate strength 1,721. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions and Deaths from each Class of Disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total Deaths from each class.	Average percentage of sick to strength.	Average percentage of deaths to sick.
Fevers......	Febris ephemera	63	0	90	0								
	,, intermitt.	20	0	23	0								
	,, tertiana..	4	0	11	0	199	2	167	0	366	2	21 ·266	0 ·546
	,, remittens.	85	0	23	0								
	,, continua..	27	2	20	0								
	Cholera..........	19	4	4	1	19	4	4	1	23	5	1 ·336	21 ·739
Diseases of the Abdominal viscera......	Diarrhœa.......	57	0	112	2								
	Dysenteria acuta et chronica	71	3	105	6	128	3	217	8	345	11	20 ·046	3 ·188
	Hepatitis acuta et chronica...	153	7	146	5	153	7	146	5	299	12	17 ·373	4 ·013
Diseases of the Lungs and Heart	Catarrhus......	29	0	45	0								
	Asthma........	3	0	0	0								
	Phthisis pulmonalis.........	0	0	0	0								
	Hœmoptysis....	0	0	0	0								
	Pleuritis........	0	0	0	0	52	0	75	3	127	3	7 ·379	2 ·362
	Pneumonia.....	18	0	30	3								
	Carditis........	0	0	0	0								
	Palpitatio......	0	0	0	0								
	Dyspuœa.......	2	0	0	0								
Rheumatic affections.	Rheumatismus acutus et chronicus..........	148	1	119	1	148	1	119	1	267	2	15 ·514	0 ·749
	Other diseases..	1035	7	1411	6	1035	7	1411	6	2446	13	142 ·126	0 ·531
	Total......	1734	24	2139	24	1734	24	2139	24	3873	48	225 ·043	1 ·239

Remarks on the table of diseases.

The foregoing table shows the nature of the *more important* diseases, which have occurred amongst the soldiers of the Horse Artillery, the admissions from which are not numerous, nor is the mortality great, an evidence of the superior healthiness of this class of men, compared with the other European soldiery. The principal exciting cause of the acute forms of bowel complaints and hepatitis, and of fevers, mentioned by the Medical Officers in charge of the Horse Artillery, is indulgence in the use of ardent spirits, and the men themselves frequently make the remark "that they work hard, drink hard, and do their duty." In the treatment of these diseases active antiphlogistic measures are indispensable, the soldiers of this arm of the force, being young robust men, selected with great care for this particular service; depletive measures are in consequence stated to be more urgently required in them, than in other European troops.

The percentage of admissions to strength, is considerably above the average shown in the general table for the division, No. 23, given at the end of this report, but this is accounted for from the numerous cases of contusions, and other injuries, to which these men, from the nature of their duties, are liable, and which are included under the head "Other diseases;"—these cases form a large proportion of the total admissions. The ratio of deaths to sick, and to strength, is however much below that in the general table—viz. the deaths to sick, having been 1·239, and to strength, 2·789.—In 13 deaths under the head "Other diseases," are included one from the explosion of a gun, one from the bursting of a powder flask, one from contusion, one from aneurisma, two from syphilis consecutiva, one from cephalalgia, and one from icterus.

EUROPEAN FOOT ARTILLERY.

No. 19.—*Table exhibiting the Number of Admissions and Deaths, from the principal Classes of disease, for ten years, from* 1829 *to* 1838.

2nd Battalion, from 1830 to 1838; 3rd Battalion, from 1829 to 1835. CLASSES.	DISEASES.	1829 to 1838. Aggregate strength 5,182. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions & deaths from each class of Disease. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each Class.	Total Deaths from each Class.	Average percentage of sick to strength.	Average percentage of deaths to sick.
Fevers......	Febris ephemera	206	1	260	0	521	4	510	8	1031	12	19 ·895	1 ·163
	,, intermittens	197	3	83	2								
	,, tertiana.....	32	0	13	0								
	,, remittens...	51	0	79	5								
	,, continua....	35	0	75	1								
	Cholera	7	1	6	2	7	1	6	2	13	3	0 ·250	23 ·076
Diseases of the Abdominal viscera......	Diarrhœa..... ..	116	0	224	6	300	12	584	36	884	48	17 ·059	5 ·429
	Dysenteria acuta et chronica.	184	12	300	30								
	Hepatitis acuta et chronica...	301	12	295	12	301	12	298	12	599	21	11 ·559	4 ·005
Diseases of the Lungs and Heart	Catarrhus	49	2	57	4	91	2	120	5	214	12	4 ·129	5 ·607
	Asthma.........	12	0	12	0								
	Phthisis pulmonalis..........	6	3	9	0								
	Hœmoptysis. ...	1	0	2	0								
	Pleuritis........	0	0	0	0								
	Pneumonia......	18	2	32	1								
	Carditis	2	0	1	0								
	Palpitatio.......	4	0	7	0								
	Dyspnœa.......	2	0	0	0								
Rheumatic affections.	Rheumat. acutus et chronicus	200	0	202	3	200	0	202	3	402	3	7 ·757	0 ·748
	Other diseases..	1917	16	2438	7	1917	16	2438	7	4355	23	84 ·040	0 ·528
	Total.....	3340	52	4158	73	3340	52	4158	73	7498	125	144 .693	1 .667

Remarks on the table of diseases.

The table of diseases for the European Foot Artillery, gives a very favourable view of the general health of these troops, the proportion of the admissions, but especially of the mortality, being much below the average shown in the general table No. 23, already referred to; the per-centage of deaths to admissions being only 1·667, and to strength 2·412, whereas the general average amounted to 3·768, and 5·870 respectively. This mortality though small, would have been still lower, were it not that numerous bad cases of chronic disease, are sent to the coast from out stations, for change of air, many of which are treated in this hospital; and from acute diseases occurring amongst recruits on landing, as shown by the extracts from the medical reports hereafter given. On the other hand, as tending to reduce

the amount of sickness and mortality, it may be observed, that as the duties of the Artillery require more robust health, and a greater degree of physical strength, than those of other foot soldiers, they are consequently, when unequal to Artillery duty, either discharged, or allowed to be transferred to the Madras European Regiments;—the Artillery being kept at all times in a perfect state of efficiency.

Several medical officers have been in charge, within the period to which these remarks refer, viz. from 1829 to 1838, and although they have differed much in their treatment of the principal diseases, such as fever, dysentery and hepatitis, they are all agreed as to the chief exciting causes of these complaints, viz:, exposure to the sun, and the intemperate use of spirituous liquors.

The following extracts from two of the medical officers reports, for the years 1833 and 34, containing some important observations on this subject, are here given.

"I stated in my last report, what I conceived to be the most general causes of these three destructive diseases, and mentioned intemperance as the principal; and the past half year does not enable me to alter that opinion.—But admitting intemperance to be the most influential cause of the speedy destruction of life, in the hot climate of India, the question is, how to remedy the evil, and this I do not pretend to solve, but am fully satisfied, that the present authorized system of conducting canteens is pregnant with the most ruinous consequences to the health of the troops. It holds out temptation to drinking in one hand, and punishment in the other, which is trying a soldier's resolution and forbearance, by too severe a test."

"Means have been taken to guard the recruits against the evils of exposure to the sun, by confining them to the barracks during the heat of the day; and instead of the daily allowance of two drams of arrack, they have only one, given after dinner; for of all the methods that could have been adopt-

ed to make men drunkards, that of serving out drams in the morning before breakfast, is the best that could possibly have been devised. Seeing the evils which prevail from the vice of inebriety, and persuaded as every one is, that it destroys even more lives than the climate, it is wonderful that a custom so pernicious in itself, and so universally acknowledged as leading to habitual drunkenness, should not be discontinued."*

In elucidation of the nature and treatment of some of the principal diseases, the following remarks taken from the half yearly medical reports, of the 3d Battalion of Artillery, for the years 1833, 34, and 35, are extracted, being considered of much value.

" Intermittents have been prevalent, but owe their origin to causes which do not exist at this station, and were confined to such men as had been employed in the expedition to Malacca, in 1831, and were exposed to the influence of marsh miasm.

"In the treatment of intermittents, the first object was to have the stomach and bowels freed from all accumulations, and then to prescribe quinine during the intervals, in doses of three grains, every two or three hours, diaphoretics were ordered in the hot fit, and determination to particular organs relieved by local blood-letting, by means of leeches; besides which blisters were used, and Dr. Twining's spleen mixture."

" The treatment which was had recourse to in remittent fever, and which has been a comparatively rare disease, consisted in the early stages, of general blood letting, and the exhibition of active purgatives, and occasional emetics; but besides the first general bleeding, much benefit often results, in the strong and robust, from repeating it at the height of the next exacerbation, headache was met by the ap-

* The system of issuing spirit rations to European troops, has been discontinued since these remarks were written, compensation being granted in lieu of them, which at present forms a part of the soldier's consolidated pay—Whatever spirits they now receive, either at the Regimental Canteens, or from the Commissariat Department, and which is restricted as to quantity, is paid for at an established rate, laid down in G. O.

plication of leeches; at the same time that these measures were employed, calomel either in large or frequently repeated small doses, combined with the powder of antimony, was given till the intestinal and biliary secretions improved, or ptyalism ensued, purgatives and sudorifics being at the same time in frequent use; where the biliary organs appeared at fault, a blister was applied over the right hypochondrium to excite the liver to more healthy action. As soon as an intermission could be obtained, immediate advantage was taken of it to prescribe the sulphate of quinine." 1st July 1833.

"Dysentery, though not exactly next to cholera in the list of diseases, is at least next to it in importance, and must ever command serious attention. In the treatment of acute dysentery, it is the almost invariable rule to employ venesection in the first instance, even where the constitutional disturbance may not be great, and the pulse but little if at all affected, and to be guided in repeating it by the appearance of the blood, or urgency of the symptoms. It is a practice which will never have to be regretted, while, on the other hand, if it is delayed, awaiting the developement of constitutional symptoms, or excitement of the pulse, we shall almost certainly err. Pain, or the sense of soreness in the abdomen, the frequency and appearance of the stools, and the state of the tongue, are the chief points for observation, and on no account should the patient's word be trusted regarding the absence of pain, but its existence or not, should be ascertained by means of pressure on the abdomen, when pain of which the patient was not before sensible, will often be complained of. The symptom of pain or tenderness in the abdomen, no matter how confined in extent, is always a cause of solicitude, and as little impression is made upon it by general blood letting, the free and repeated application of leeches is resorted to, and persevered in till all sense of pain and tenderness have subsided. In combination with those means, full doses of calomel and ipecacuanha, are usually given at night, or full doses of calomel and Dover's powder; and during the day, smaller doses of ipeca-

cuanha are so prescribed as to keep up a constant sense of nausea. Where tenesmus is severe, leeches to the anus, fomentations, and suppositories of opium, often prove of great benefit. It is customary to precede the use of these medicines by a dose of some laxative, but, in inflammatory cases, it is seldom repeated, as laxatives often aggravate the sufferings of the patient, the unhealthy appearance of the stools being the result of morbid secretions, not to be improved by purgatives, but by removing the disease on which they depend. In cases dependent upon accumulation in the intestines, and free from inflammatory symptoms, purgatives are of use, and are frequently employed. After inflammatory symptoms have been subdued, and the disease appears to be protracted by a want of tone in the intestines, the nitric acid mixture, combined with an opiate, is administered, and seems to be well adapted for the advanced stages of dysentery, and for subduing the irritability arising from loss of tone in the bowels."

" It would not be difficult to assign other reasons than the influence of climate, for the occurrence of many of the cases of remittent fever, though many instances have occurred of men being taken suddenly ill, without any previous indiscretion on their part. The fever was usually characterized by severe headache, pain at the pit of the stomach, nausea and vomiting, with a costive state of the bowels, great heat of skin, and frequency of pulse, pains in all the joints, and in the back or loins ; some attacks were preceded by a sense of chilliness, but this was by no means general. Although the blood scarcely ever exhibited the usual inflammatory appearances, venesection, where the symptoms indicated increased arterial action, was the first measure adopted, its repetition, and the quantity to be taken away, being regulated by its effect upon the vascular system ; next to bloodletting, purgatives were held in the highest estimation, and by the united timely use of both, it was often remarkable how much the force of the fever was subdued, in the early stage. Purgatives

are considered of the greatest importance, and calomel, than which we have not a better, or more powerful purgative in remittent fever, was given in large doses at the commencement, to open the bowels freely, and to bring the system the more readily under its influence ; combined with the powder of antimony, it was continued in smaller doses every two or three hours, until a remission took place, or salivation was induced. If after the free use of general and local blood-letting, and purgatives, a remission was not obtained, ptyalism was hailed as a precursor to an abatement of the febrile symptoms ; not that the fact, of the system being brought under the mercurial influence, was the cause of the subsidence of the fever, but rather that it was indicative of the system being less under the dominion of the febrile action. From present experience, it would not be deemed prudent, not to push the mercury to salivation, when the symptoms call for its continuance, but how often is a severe ptyalism, and its consequence, a tedious convalescence, to be regretted? The ill effect however, of the indiscriminate use of mercury is particularly observed, in cases where, instead of a free salivation, there is a mere spitting, with a pale and swollen appearance of the gums, or continued morbid heat and dryness of skin, with restlessness, and a quick irritable pulse ; in this state, the mercury contributes in a marked manner towards the aggravation of the symptoms, whereas by temporizing at the commencement of the attack, by means of saline antimonials and laxatives, sponging the body with vinegar and water, and guarding against, or removing local determinations, to particular organs, by leeches and the application of blisters, and repeating those measures according to the intensity of the disorder, this may be prevented."

"These observations are also applicable, in some degree, to certain states of inflammation of the liver."

"Every step taken was with the view of obtaining a remission, that recourse might be had to the best, and in many cases

the only expedient for preventing the recurrence of the exacerbations, the use of quinine."

"In one instance only, was the depleting plan followed by unfavorable symptoms, and in this case soon after a moderate bleeding and free purging, the patient fell into a state of extreme debility, from which however he recovered by the administration of quinine, in combination with ammonia frequently repeated, and wine."

Hepatitis. "In Acute hepatitis there has been no deviation from the plan of treatment formerly described, namely, general and local blood-letting, purgatives, and blisters; and while engaged in subduing the inflammatory symptoms by depletion, mercury was given, with the view of restoring the healthy action of the liver." Dated 31st December, 1833.

"On comparing the half yearly returns of sick for 1834, it will be found, that the admissions have been considerably increased in the second half, by the arrival of recruits from England. Six deaths have taken place, five among the recruits, and one, the case of a man whose constitution was worn out by a complication of maladies, and who was about to be discharged from the service."

"From the fact of Europeans recently arriving in India, being so liable to bowel complaints, dysentery and diarrhœa have accordingly formed a great portion of the admissions into hospital. The influence which the climate has in predisposing the constitution to disease, is of itself sufficient to induce intestinal, hepatic, and febrile diseases, but none who are acquainted with the habits of soldiers, will question the effects of exposure to the sun, and intemperance, in producing those diseases regarded as peculiar to the country, notwithstanding the care which is taken to guard them against exposure to the one, and to prevent their having free access to the other." Dated 31st December 1834.

"On comparing the return of the 1st half of the year 1835,

with those of similar preceding periods, a striking difference is observed in the number of siek, which is much greater than usual. The sickness has been confined to a company of the Battalion, which returned to head quarters in January last, the men of which had suffered severely from the climate of Masulipatam; disease has however mueh abated since their removal from that station, and many, who arrived in a wretched condition, have recovered their health and returned to duty; a few however are still in a preearious state, whilst others, without any marked disease upon them, have eontinued pale and delieate, and are liable to viseeral affeetions; but on the whole, there has been a decided, and manifest change for the better, in that part of the battalion."

"There have been three deaths in the half year, one from chronie dysentery, one from the effeets of long continued intermittent fever, and the third from extensive pulmonary disease. Hepatic and dysenteric affections, have been comparatively rare, while the prevailing diseases have been fevers, of different types, among whieh intermittents bear a large proportion, produeed by malaria, or some peculiarities of the climate of Masulipatam. Fever has either been of a simple form, or complicated with visceral affeetions, whieh react upon the system, aggravating its disordered state, and thereby rendering the original disease more obstinate. The tendency to relapse at particular periods has been great, while the recurrence of the disease, on many oeeasions, is at intervals so remote, that the term is of doubtful application, and the disease is frequently excited by apparently very slight causes. In cases where, either from the particular obstinacy of the disease, or from its more malignant character, lesions in the structure of the abdominal viseera had taken plaee, they were characterized by a peculiarly sallow, oedematous countenanee, by fulness and distention, with weight and pain of the epigastrium and hypochondria, at times combined with general dropsy, and frequent and urgent dyspnœa, but more frequently with ehronic bowel complaints; and again, in some eases, instead of a number of organs being implicated in the dis-

eased action, one only of the important viscera was affected. When the liver was the organ concerned, the mischief done to the general health was found to be great, and the progress towards recovery, was tardy in the extreme; while simple enlargement of the spleen, without other complications, had but little apparent influence on the general health."

"Several cases of enlarged spleen, have been met with among the wives, of the party from Masulipatam, which disease appears to have had little influence on their general health, but in all, the menstrual secretion became obstructed. It has happened in some cases, where the spleen had been so far reduced in size by treatment, as to be scarcely discernible, that it has rapidly enlarged, during a single paroxysm, so as to be felt projecting under the false ribs."

"In simple cases of intermittent fever, after the bowels have been opened, cinchona bark, was found to be successful in removing the disease, unless when the patient was again exposed to atmospherical causes, or other circumstances capable of producing a recurrence of the complaint; but valuable a medicine as the bark is justly esteemed to be, in intermittents, it was never administered after visceral disease appeared; in cases of this description, the first object being to restore the healthy functions of the diseased organ, so essential to the patient's recovery."

"In cases complicated with affections of the liver, characterized by enlargement of the organ, and attended with great constitutional excitement, though perhaps with no pain, general blood-letting, leeches to the epigastric and right hypochondriac regions, blisters and full doses of calomel, followed by purgatives, were prescribed; and upon the mitigation of the more urgent symptoms, quinine or the arsenical solution, were given to prevent the recurrence of the ague."

"In less urgent cases, general blood-letting was dispensed with; and in simple engorgement of the viscus, that is, when

constitutional excitement did not exist in the interval, the quinine or arsenical solution were at once prescribed, to prevent the evil effects of a recurrence of the paroxysms; where chronic bowel complaints coexisted, with other affections of the viscera, no good resulted from attempting to suppress them; the first object being the removal of visceral disease, and this was more certainly attained by the employment, in addition to other remedies, of leeches over the course of the colon, or diseased viscus, and emollient and anodyne enemata; where dropsy existed, diuretics were combined with the other usual remedies. In spleen cases, attended with tenderness in the organ, repeated local bleedings from the left hypochondriac region were employed, while blisters, and setons, were afterwards resorted to; and a free state of the bowels was kept up by the spleen mixture, and a combination of aloes, with the sulphate of iron. In cases of sanguineous congestion, and where all inflammatory symptoms had subsided, the iodine, from its powers in promoting absorption, was pointed out by Mr. Cuddy, as an appropriate remedy, and was employed with marked benefit, in solution, and in the form of ointment, rubbed in once or twice a day, over the enlarged gland."—dated 30th June, 1835.

NATIVE FOOT ARTILLERY, OR GOLUNDAUZE, 4th BATTALION.

No. 20.—*Table exhibiting the Number of Admissions and Deaths, from the principal Classes of Disease, from* 1829 *to* 1838, *exclusive of* 1832.

CLASSES.	DISEASES.	9 years. Aggregate strength 4,417. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions & deaths from each class of Disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
Fevers......	Febris ephemera	71	1	56	0								
	,, intermittens	56	3	28	0								
	,, tertiana.....	1	0	5	0	150	8	107	5	257	13	5 ·818	5 ·058
	,, remittens...	10	2	4	0								
	,, continua....	12	2	14	5								
	Cholera........	4	3	13	2	4	3	13	2	17	5	0 ·384	29 ·411
Diseases of the Abdominal viscera......	Diarrhœa......	8	1	7	0								
	Dysenteria acuta et chronica.	9	3	11	0	17	4	18	0	35	4	0 ·792	11 ·428
	Hepatitis acuta et chronica...	4	0	0	0	4	0	0	0	4	0	0 ·090	0 ·0
Diseases of the Lungs and heart.	Catarrhus......	16	1	13	0								
	Asthma........	7	1	6	1								
	Phthisis pulmonalis..........	6	1	2	2								
	Hœmoptysis....	0	0	0	0								
	Pleuritis........	0	0	0	0	32	5	21	3	53	8	1 ·199	15 ·094
	Pneumonia......	2	2	0	0								
	Carditis........	0	0	0	0								
	Palpitatio......	1	0	0	0								
	Dyspnœa.......	0	0	0	0								
Rheumatic affections.	Rheumat. acutus et chronicus.	72	1	48	0	72	1	48	0	120	1	2 ·716	0 ·833
	Other diseases..	624	13	523	17	624	13	523	17	1147	30	25 ·967	2 ·615
	Total....	903	34	730	27	903	34	730	27	1633	61	36 ·970	3 ·735

The table of diseases for the Native Foot Artillery, exhibits a small amount of sickness and mortality, although they have been much employed on detachment duty, at the stations on the Tenasserim Coast, and other eastern settlements; the per centage of sick to strength, 36·970, and of deaths to strength, 1·380, being considerably under the average shown in the general table No. 25. The majority of cases, under the head "Other diseases," consisted of local affections, such as contusions, ulcers, and itch, and of the 30 deaths under that head, six were from atrophia, (five of whom were transferred from the detachment at Singapore to the Mount,) one from beriberi, one from apostema lumborum, one from ulcus grave, one from hydrothorax, (also transferred from Singapore ;) there were besides these, two sudden deaths, supposed to be from

ruptured blood vessels, one from aneurisma, one from dyspepsia, and one from hœmorrhois; the average proportion of deaths to sick treated, has it will be apparent, been much increased by these transfers.

POONAMALLEE.

Description of. Poonamallee, the Depôt of Her Majesty's troops at this Presidency, is situated 13 miles due west of Fort St. George, and about four or five north of St. Thomas's Mount; the country is flat, and but little raised above the level of the sea; and the land in the vicinity though sandy, is much of it under rice cultivation.

The cantonment is about half a mile square, and the great western military road from Madras runs through it. It is well drained, and there are no accumulations of stagnant water, or other sources of malaria, which circumstances, together with the openness of the surrounding country, permitting the sea breeze to pervade all the houses, contribute much to the salubrity of the place; and it has accordingly always been found to be a remarkably healthy station.

Barracks. The barracks are situated at the west end of the cantonment, forming an oblong square, they are provided with outer and inner verandahs, the outer one being enclosed. The building is capable of containing 500 troops, is well ventilated, and has the requisite out offices attached to it at a convenient distance, there is also a supply of good water in the immediate vicinity.

Fort. The old fort of Poonamallee lies to the eastward of the barracks, distant 400 yards; it is of a square form, being 175 yards long, by 142 broad, and surrounded by a rampart 18 feet high; cells have been erected on each of the four corner bastions, for men sentenced to solitary confinement; and within the fort are a magazine, ranges of store rooms for the clothing and arms, of Her Majesty's troops, and godowns for barrack supplies.

Hospital. The hospital which is situated within the fort, is a pent roofed and tiled building, forming two sides of a square, one running north and south, in length 120 yards, 16 feet in breadth, and 10½ feet high; it is divided into seven wards, four of which are for male patients, each capable of containing 20 men; two for European females, and one for the sick of the detachment of sepoys on duty here. The building is encircled by a verandah. The other range which runs east and west, is of nearly the same dimensions, and is divided into several apartments, affording accommodation for 80 patients. At the north-east angle are the dispensary and store rooms, cookrooms and other offices being likewise attached to it. Convalescents in hospital take exercise on the ramparts of the fort, which from being well raised are open to the sea breeze.

Some of the officer's houses are situated in the cantonment, and others are detached, at a short distance, in the neighbourhood.

Village. The pettah, or native village, lies south-east of the fort, distant about 600 yards, it is tolerably airy and clean, the general bazaar forming the principal street; the native population amounts to about 7,000, exclusive of 200 sepoys with their families. The inhabitants are generally cultivators.

Troops. The number of troops at the depôt, consisting chiefly of recruits arriving from England, and invalided, or time expired men returning home, varies from time to time very considerably, being usually from 100, to 500 men.

Recruits generally arrive from England in the months of September and October, and remain at the depôt till after the north-east monsoon; and invalided men, come down from the stations in the interior, about the end of the year, for the purpose of being sent home.

Climate. The climate does not differ materially from that of Madras, and the neighbouring station of the Mount.

Diseases. The diseases to which the European troops are most subject, are *fevers, bowel complaints* and *hepatic diseases,* and the principal causes of these affections, are exposure to heat, and the abuse of spirituous liquors.

EUROPEAN TROOPS.

No. 21.—*Table exhibiting the Number of Admissions and Deaths from the principal Classes of Disease, for ten years, from* 1829 *to* 1838.

CLASSES.	DISEASES.	1829 to 1838. Aggregate strength 1,833, 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions & deaths from each class of Disease. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each class.	Total deaths from each class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
Fevers......	Febris ephemera	0	0	0	0	191	1	393	11	554	8	31 ·860	1 ·339
	,, intermittens.	18	0	32	1								
	,, tertiana......	0	0	0	0								
	,, remittens....	12	0	18	1								
	,, continua	161	1	343	5								
	Cholera.........	2	2	6	3	2	2	6	3	8	5	0 ·436	62 ·500
Diseases of the Abdominal viscera.......	Diarrhœa.......	75	2	69	0	186	11	349	12	535	23	29 ·187	4 ·299
	Dysenteria acuta............	99	9	269	12								
	,, chronica.	12	0	11	0								
	Hepatitis acuta	176	5	153	5	223	5	212	6	438	11	23 ·805	2 ·511
	,, chronica...	50	0	59	1								
Diseases of the Lungs and heart.	Catarrhus.......	26	0	50	1	219	17	195	12	414	29	22 ·585	7 ·001
	Asthma.........	13	0	5	1								
	Phthisis pulmonalis..........	14	7	13	7								
	Hœmoptysis....	0	0	1	0								
	Pleuritis.........	0	0	0	0								
	Pneumonia......	146	9	113	3								
	Carditis	1	0	5	0								
	Palpitatio	6	0	7	0								
	Dyspnœa.......	13	1	1	0								
Dropsies...	Anasarca.......	3	0	6	1	5	2	17	3	22	5	1 ·200	22 ·727
	Ascites.........	2	2	11	2								
Rheumatic affections.	Rheumat acutus	142	0	142	0	227	2	233	1	460	3	25 ·095	0 ·652
	,, chronicus.	85	2	91	1								
Venereal affections...	Syphilis primitiva..........	53	0	111	0	72	0	196	0	268	0	14 ·620	0 ·000
	,, consecutiva.	4	0	8	0								
	Gonorrhœa......	13	0	69	0								
	Hernia humoralis..........	2	0	8	0								
	Other diseases..	744	12	952	7	744	12	952	7	1696	19	92 ·525	1 ·120
	Total....	1872	52	2553	51	1872	52	2553	51	4425	103	241 ·407	2 ·327

Remarks on the preceding table.

The acute forms of disease are almost exclusively confined to the young and recently arrived recruits, whilst those of a chronic nature such as diarrhœa, chronic dysentery and hepatitis, occur amongst the invalids or sickly men sent from out stations, either for change of air, or for the purpose of being invalided. Chronic affections of the chest, which by the accompanying table will be observed to be very frequent, chronic rheumatism, anasarca, ascites and syphilis consecutiva, have also occurred, almost exclusively amongst the latter description of men.

The great proportion of sickness to strength, upwards of 240 per cent, is fully accounted for, from a considerable part of the troops being worn out men, from disease and length of residence in India, and many of them are therefore on the sick report from the time of their arrival at the station, until their departure.

The mortality however, will be observed not to be above the usual ratio, viz. 2⅓ per cent on the sick treated, and little more than 5½ per cent, on the strength.

The sick both of the recruits and invalids, have been included in the same returns, it was therefore found impossible to shew separately, the diseases which have occurred in each of these bodies of men.

The table shews the whole amount of disease, and mortality, for a period of ten years, with the percentage of sick to strength, and of deaths to sick treated. A few observations on the nature and treatment of the more important diseases, may be acceptable.

Fever.

The cases of intermittent, and remittent fever, have occurred almost exclusively in soldiers who have arrived from up-country stations, particularly Bangalore and Masulipatam, at which places these diseases were contracted. The intermittents have been, for the most part, of a chronic

nature; and remittents were generally contracted on the march to the station.

Remittent fevers have been treated by moderate depletion and purgatives, previous to the exhibition of bark or quinine; in intermittents it was observed, that although bark and quinine failed in checking, or subduing the disease, at the stations where the fever had been contracted, a short residence at Poonamallee enabled these remedies to produce their specific effect, a strong proof of the salubrity of the station; and patients suffering from this disease, have accordingly often been sent to the depôt for change of climate, with the greatest benefit.

The continued form of fever was that most generally met with, and was chiefly occasioned by exposure to heat during the day, and cold at night, and by intemperance. This disease has been confined almost exclusively to recruits, and in the majority of cases, was attended with more or less local inflammation, generally affecting the head, or liver. A remarkable exception however from the usual complication happened in 1836; a body of 225 recruits arrived, in October of that year, and on the 30th of the month, a severe hurricane with a heavy fall of rain, having occurred, as noticed in the Presidency Report, a short time afterwards catarrhs became general amongst the recruits, and twenty-eight cases of severe fever were admitted into hospital, complicated with pneumonia.

Many of the cases of continued fever have been cut short by bleeding, either general or local as indicated by the symptoms, the other means employed consisted in the exhibition of mercurial purgatives, and diaphoretics, with a small dose of calomel and antimony at bed time. In mild cases, or those arising from simple excitement, v. s. has not been found necessary, the subordinate measures mentioned, being sufficient to effect a cure; whilst in cases which shewed no disposition to yield to ordinary measures, calomel and antimony were given, to the extent of affecting the system, and with marked success

Of the six fatal cases two occurred in recruits, and the other four in old soldiers; in the latter, acute or subacute disease is frequently excited by the excessive use of spirituous liquors, and indulgence in other irregularities, to which a great many of them are but too prone, and who can therefore ill bear the necessary depleting treatment; in these men local disease is readily re-excited in organs which have been the seat of former lesion, and frequently ends in some of the untoward consequences of inflammation, such as effusion in the head, abscess in the liver, or ulceration of the bowels.

Cholera. Few cases of *cholera* have occurred at this station, and this disease has not been met with at Poonamallee except in a sporadic form, during the period embraced in these remarks, and the fact is worthy of notice, that cholera has not prevailed as an epidemic either at Palaveram, St. Thomas' Mount or Poonamallee in that time; nor has it been epidemic at the latter station since its first general outbreak in India, except in the first half of the year 1822, when 21 cases occurred in a numerical strength of 384 men, and again, in the second half of the year 1825, when there were 20 cases, in a strength of 679 men; in the first instance two deaths took place, and in the second eight.

The causes of this marked immunity from the visitations of cholera, when it has been epidemic several times in the immediate vicinity, is probably inexplicable, but such is the fact.

Diarrhœa. *Diarrhœa* a disease of much importance is, as already remarked, very generally of a chronic nature, occurring in old men from organic disease of the bowels, and of the other abdominal viscera. The treatment in this class of patients is generally merely palliative. This disease however is not unfrequently seen in a different form in recruits, occasioned by cold, intemperance, indulgence in fruits and in toddy, or the fermented juice of the palm tree; in such cases

the disease is speedily checked by a dose of oil, with a few drops of laudanum given in the first instance, and followed by a little calomel, colocynth and hyosciamus, at bedtime; if neglected however it often runs into dysentery, but the purging is generally so profuse as to frighten the patient, and compel him to apply early for treatment.

Dysentery. Another disease of more importance than the preceding, and of frequent occurrence at this station, is *dysentery;* this affection with *hepatitis,* and *fever* of the continued type, being the most prevalent diseases amongst Europeans. The greatest number of cases, and almost all those of a severe and acute nature, have happened amongst the recruits. The exciting causes mentioned by the medical officers, are, exposure to currents of air during the night in barracks, and to the heat of the sun during the day, bathing while heated and in a state of perspiration, excessive indulgence in the use of spirituous liquors, such as toddy, and pariah arrack in which chillies have been infused, and eating unripe fruit of various kinds.

Recruits affected with dysentery generally apply for admission at an early period of the complaint, and have been treated by active depletion, general and local; ipecacuanha in five grain doses, combined with calomel have at the commencement, formed the principal remedies; oily laxatives, and counter irritation over the abdomen by means of blisters, with anodyne and emollient enemata, have also been employed as auxilliaries. In old soldiers depletion is less required, and leeches have been found sufficient, with the above mentioned remedies.

The mortality in acute dysentery, has been a little more than 5½ per cent, in the ten years from 1829 to 1838, while during seven years, from 1820 to 1826 inclusive, it was nearly 7½ per cent, or 59 deaths in 808 cases; and in the chronic form, during the last mentioned period, the per centage was fully 15, or 35 deaths in 230 cases, while in the

table for 10 years, only 23 admissions are recorded, and no deaths. The diminution in the number of admissions of the chronic form of this disease, is very remarkable, and involves a question of much importance; can it have resulted from the more sparing use of calomel, and the more general abstraction of blood in the treatment of acute dysentery, and of acute tropical diseases in general, of late years?

Hepatitis. *Hepatitis*, both in the acute and chronic form, is another very frequent disease; it is most generally observed in the first form amongst recruits, although acute attacks have been occasionally excited in old soldiers. The treatment in young men must necessarily be more active, than in the old, and a well timed venesection will frequently remove the complaint in both, but in the one it is more urgently required and better borne, than in the other, and in many instances it is found necessary to repeat it; calomel is given with antimonial powder in equal parts, in three or four grain doses, three times daily, till salivation is produced; it has however been observed, that old soldiers are sooner brought under the influence of the mineral than recruits, and therefore it has been exhibited to them in smaller doses. In many cases venesection may give place to local depletion with propriety and advantage, but in young recruits when the symptoms are well marked, it is imprudent to delay v. s. even for one hour, and in no case of this description, can leeches be trusted to with safety, as a substitute for general depletion.

The percentage of deaths to sick treated in acute hepatitis, has been three per cent, in the ten years ending in 1838, and during the seven years from 1820 to 1826, the ratio of mortality was almost the same.

Chronic hepatitis. Cases of the *chronic form of hepatitis* are always to be met with at the depôt, generally transferred from up-country stations. In the treatment much benefit is derived

from the application of a few leeches, followed by repeated small blisters to the side, or the insertion of a seton, the use of laxatives, tonic bitters and mineral acids, particularly the combination of the nitric and muriatic, the latter remedy being not only given internally, but is also employed externally as a bath, or lotion. In most cases mercury is used chiefly as an alterative, a few grains of blue pill being given occasionally to correct functional derangement, and it has been found, that in most forms of organic disease of the liver, mercury exerts but little other beneficial influence, and therefore is sparingly used.

Of this form of the disease, there have been during the ten years, 190 cases treated, with one death, while during the years from 1820 to 1826, no fewer than 426 cases were admitted, and 21 deaths occurred, or very nearly 5 per cent. The frequency of chronic hepatitis in the latter period, compared with the number which has occurred during the ten years, is a circumstance equally deserving of observation, as the difference in the number of cases of chronic dysentery before remarked, in the same period.

Diseases of the Lungs. By the table it would appear, that chest affections are by no means of unfrequent occurrence. Previous to the year 1833, several of the diseases of the lungs and pleura, were entered under the name of "*Thoracic inflammation*" which, in the accompanying table are included under the head *Pneumonia*, many of them however were merely simple *catarrh*, for after 1830, when the list of diseases was extended, 76 cases of *catarrh* appear on the returns, while there are only 22 of *Pneumonia*; all the deaths under the head *Pneumonia*, happened previous to 1833.

Acute diseases of the lungs are frequently excited in men recently arrived in the country, and well marked, and even severe cases of pneumonia, are by no means unfrequent in old soldiers, though the general observation by authors, that chest affections are more rare amongst Europeans in India, than in England, is quite correct.

In the preceding remarks, an instance is related of fever occurring during the cold season of 1836, complicated with a catarrhal affection, at the same time several cases of severe catarrh, and of pneumonia, were also met with at the depôt. The treatment of these affections, does not appear to differ from that followed in the same diseases in Europe.

Phthisis Pulmonalis. Of *Phthisis pulmonalis* 27 cases are observed in the table, and of this number, 14 of the patients had been in India under four years, in whom the disease had existed previous to arrival in the country, having originated either during the voyage or in Europe; several died in six or eight months after arrival, and two within the short space of one month. In cases of this disease it has frequently been observed, that when tubercular deposition has not gone to any considerable extent, previous to the arrival of the person in India, that the tubercles remain quiescent and unirritating, for on examination of the lungs of patients dying of dysentry, fever, or hepatitic abscess, numerous hard tubercular bodies are often found in the upper lobes of both lungs, which generally appear pale, the surrounding cellular tissue in such cases, not exhibiting any inflammatory appearance, but on the contrary, appearing quite healthy. In some cases however, when the constitution is deeply tainted with the scrophulous diathesis, although the tendency to further deposition becomes checked in a considerable degree, it has been observed, that such persons are very liable to bronchitis, and inflammatory affections of the lungs, during which the tubercles advance to suppuration, though very slowly; such men are frequently in hospital, and several instances are recorded, in which the disease has been progressing in this way, for a period of upwards of ten years. A remarkable case of a pensioner dying of tubercular phthisis, at the advanced age of 97 years, is noticed in one of the reports; the man had been resident in India upward of 60 years, but the history of the case is unfortunately not given.

Rheumatism. *Rheumatism* forms a large proportion of the admissions into the Depôt hospital, both in the acute and

chronic forms; all the cases under the latter head, and a great proportion of those under the former, have been transferred from inland stations, for the purpose of being invalided; the affection in many of them becoming aggravated, and of a more acute character, on the march to Poonamallee.

Rheumatism, in the majority of cases, is an obstinate and distressing complaint, and patients labouring under it, are generally in a debilitated state on their arrival, and have invariably suffered from diseases, in the treatment of which mercury had been freely administered, and a considerable number of them had suffered from primary syphilis.

The articular form of the disease, as already remarked at page 148, is very seldom met with in Europeans, and the joints are but seldom affected with enlargement or effusion; the chronic inflammatory action whatever its nature may be, whether occasioned by the use of mercury as above hinted, which there is every reason to believe is frequently the case, or by a syphilitic taint in the system, is attended by pain, not only around the joints, but in the long bones, especially the *tibia* and *femur*, and bones of the head, which become affectedwith periosteal enlargements; the pain being generally most severe during the early part of the night. Another form of this affection, the least frequent, though perhaps the most obstinate, is when it assumes an intermittent character;—this is met with chiefly in old residents, and in men whose constitutions have become broken down by disease, and who have suffered much from fever. The attacks occur usually every third or fourth day, but patients occasionally remain free from them, for one or two months at a time; severe paroxysms of pain are frequently followed by swellings, or nodes particularly on the bones of the head. In some of these cases the system has been tainted with syphilis, whilst in others the constitution was altogether unaffected with that disease. The term rheumatism would therefore appear to be used in a very undefined manner, it being applied to disease occasioned by the abuse of mercury, to the

effects of syphilis, to both conjoined, and to the sequelæ of malarious poison. It has been found in the intermittent form of rheumatism, that mercury, mineral acids, and the other usual treatment for rheumatic pains, afford but temporary relief; arsenic however has been found highly useful, and quinine given as a tonic in small doses, but especially in larger doses with a view to obtain its anti-periodic influence, has been attended with the best results.

The primary object, in the treatment of that form of the disease following the use of mercury, is to improve the general health of the patient, and this has been best effected by means of the simple and compound decoction of sarsaparilla, bitters, mineral acids, occasional laxatives, and opiates at bed-time to procure rest; with the local application of leeches, blisters, and stimulating liniments; flannel rollers to the limbs have also produced much benefit in such cases; mercury has been frequently given, but invariably with only temporary benefit, and the pains have been observed to return, even when the system was under its influence.

In the second class of cases, where the system is tainted with syphilis, along with the preceding treatment, mercury has very often been found extremely efficacious, given in the form of Plummer's pill or the blue pill, as an alterative. Relapses are very common in this form of the complaint, and the patient becomes weakened and emaciated from constant suffering, the digestive organs sympathise with the disease of the general system, and dyspepsia in some of its various shapes is invariably present.

Iodine, in the form of the Hydriodate of potash, has of late years been found extremely useful in the various forms of rheumatism especially the syphilitic. It has been employed very generally for several years past, but as yet it has not had a fair trial, the supply being limited; the testimony of H. M.'s medical officers however, is invariably favourable to it, as a powerful alterative and tonic.

For several years past rheumatism has increased in frequency, in a remarkable degree, thus in 1836, 37, and 38, not less than 2,980 cases were admitted into H. M.'s hospitals, and of this number 217 men were invalided, or fully 7 per cent; while during 1829, 30 and 31, only 1,159 cases were admitted, and 38 invalided, or a little more than 3 per cent., on the number treated; the cause of this increase and of the more inveterate nature of the disease, it would perhaps be difficult to explain, but such is the fact.

REMARKS ON THE GENERAL TABLES.

Remarks on the general tables of disease.

The general table No. 22, of European military sick, for ten years, for H. M.'s troops at Poonamallee, and Arnee, and the H. C. Artillery at St. Thomas's Mount, and the Drum boy establishment at Wallajahbad, shows the total amount of sickness and mortality from the most important diseases, each half year, during that period, along with the annual per-centage of sick to strength, of deaths to sick treated, and of deaths to strength; the average of these respectively being, as shewn in the abstract table No. 23,—155·773,—3·768 and 5·870; and except in 1832, and 1833, this average holds pretty fair, in these two years the ratio of mortality to sick treated, and to the numerical strength, was more than doubled, which it will at once be observed, was occasioned almost solely by cholera, this disease having prevailed epidemically, in both these years, in H. M.'s 45th, 46th and 62nd regiments, while marching in the division, particularly in north Arcot. In 1834 the admissions were increased above the average, but not from sickness of importance.

In the table No. 22, the columns for cutaneous disease, and delirium tremens are blank, till 1834, owing to these diseases not being specified in the returns previous to that year, it is believed however, that the result of the five remaining years, gives a fair average of the proportion of these complaints.

In the general abstract table No. 23, it will be observed, that the total admissions have been 19,319, and the total deaths 728, from an aggregate strength of 12,402. The most prevalent diseases have been *fevers, dysentery, syphilis, rheumatism, hepatitis, diarrhœa* and *thoracic diseases;* and the most fatal have been *cholera, dysentery, thoracic diseases, hepatitis, fever* and *diarrhœa*—the per-centage of admissions and deaths from each of which, is noted in the table.

It will also be seen, that the admissions are somewhat more numerous in the second half yearly period, chiefly from bowel complaints and fever; and that the increase of deaths during this period, has been occasioned principally by cholera.

Similar tables Nos. 24 and 25, for the native troops, are appended, they comprise the sick of the military at St. Thomas's Mount, Palaveram, Wallajahbad, Arcot and Vellore; the total number treated has been 31,825, and 993 deaths have occurred in an aggregate strength of 64,484:—the average per-centage of sick to strength, has been 49·353, of deaths to sick treated 3·120, and of deaths to strength 1·539. The most numerous admissions have been from *fevers, rheumatism, cutaneous diseases, ophthalmy,* and *syphilis;* and the mortality has resulted principally from *cholera, fevers, bowel complaints, thoracic diseases* and *rheumatism.*

The average has been pretty uniform throughout the decennial period, except in the years 1833, 37, and 38—when the mortality was considerably increased, and almost solely it will be seen by cholera. In 1833 this disease was epidemic amongst the native troops, at Arcot and Vellore, at the same time that it prevailed in H. M.'s 62nd regiment when marching through the division as already noticed. It is of importance to remark that during the preceding year, the native regiments at these, and other stations in the centre division, were almost free from cholera, although H. M.'s 45th regiment suffered severely from it while marching from Arnee to Masulipatam, in the months of September and October, of that year; no less than 177 cases with 97 deaths, occurred in the 45th regiment during these two months, while only 12 cases, with two deaths, happened amongst the entire native force of the division, in the same period. Again in 1837, and 1838, cholera attacked three native corps while marching in this division, namely the 8th, 24th and 27th regiments; the 8th when passing through the Nellore Collectorate in 1837, the 24th nearly on the same ground in 1838, and the 27th in the Chittoor

district in the beginning of the same year. On reference to the Table No. 22, (for Europeans) but few cases of cholera will be seen to have happened in 1837, and those in 1838 took place in H. M.'s 63d regiment in the month of January, when temporarily stationed at Arnee.

It may be mentioned here, in connexion with this subject, that the 8th and 24th regiments N. I., when suffering from cholera in the years 1837 and 1838, were encamped on the Red Hills, an elevated, open and dry piece of ground, about seven miles N. W. of Fort St. George, before they were allowed to march into the cantonment of Palaveram, where they were to be stationed. The ground in the neighbourhood of the hills, is of a lateritious nature, and appears in every way well adapted for the encampment of troops, affected either with epidemic or contagious disease; they also offer an eligible retreat for convalescents from the Presidency, and are frequently resorted to for this purpose, several bungalows having been erected on the borders of a large lake close thereto.

The tabular statements No. 28 and 29, have been framed from the abstract returns No. 23 and 25 ; and will be found to exhibit much useful and interesting information, relative to the more important diseases.

The tables No. 26 and 27, for European and native sick respectively, have been drawn up similarly to those given in the report for the Presidency division; they exhibit the admissions and deaths from specific diseases, in each of the classes therein mentioned, during a period of five years, from 1834 to 38 inclusive; the total sick from each class is also shewn with the mortality, and the percentage of admissions to strength, and of deaths to sick treated.

Amongst the European troops, (table No. 26) the most numerous admissions have been from the classes of *abdominal complaints,* including *dysentery and hepatitis,* (which from their importance, have been exhibited separately in the

tables), *venereal diseases, rheumatic affections, wounds and accidents, diseases of the brain,* and *of the lungs;* and the most fatal have been *abdominal complaints, diseases of the lungs, and of the brain, fevers, cholera, rheumatic affections and dropsies.*

The per centage of sick to strength, during these five years, has been 149·419, of deaths to sick treated 2·866, and of deaths to strength 4·282.

In the corresponding table for the native troops No. 27, the greatest number of admissions it will be observed have been from the classes of *fevers, rheumatic affections, wounds and injuries, abdominal complaints,* including *dysentery and hepatitis, diseases of the skin* and *venereal complaints;* and the greatest mortality has been occasioned by *cholera, fevers, diseases of the abdominal viscera,* and *of the lungs, specific diseases, rheumatic affections, and diseases of the brain.*

The ratio per cent. of admissions to strength, during these five years, has been 51·494, of deaths to admissions 2·957, and of deaths to strength 1·811.

From the two comprehensive returns No. 26 and 27, the tabular statements No. 30 and 31 have been framed, which exhibit in a small compass much valuable information, relative to the diseases of European and native troops.

CENTRE DIVISION.

Table No. 22.—Return of sick of the European Troops, exhibiting the half yearly Admissions and Deaths from the principal diseases, and those which have been either Epidemic or Endemic, during the period of ten years, from 1829 to 1838 inclusive.

Years.			Admissions and Deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	,, continued.	,, intermittent.	,, remittent.	Guinea worm.	Hepatic diseases	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small Pox.	Syphilis, &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & Injuries.	Other Complaints.	Average strength each year.	Annual per centage of sick to strength.	Annual per centage of death to sick treated.	Annual per centage of deaths to strength.
1829	Admitted.	1st half.	1,207	1	0	0	9	0	0	64	143	0	0	165	22	23	0	142	7	0	52	105	0	61	51	0	124	258	1,222	153 ·027	3 ·155	4 ·828
		2d ,,	663	1	0	0	1	0	0	28	126	0	0	72	14	22	0	51	1	0	47	59	0	22	19	0	43	157				
	Died......	1st half.	42	1	0	0	3	0	0	0	24	0	0	0	0	1	0	5	0	0	0	0	0	0	4	0	0	4				
		2d ,,	17	1	0	0	0	0	0	0	11	0	0	0	0	0	0	3	0	0	0	0	0	0	1	0	0	1				
1830	Admitted.	1st half.	690	0	0	0	1	0	0	13	118	0	0	72	19	20	0	55	5	0	46	35	0	19	32	0	51	204	1,150	156 ·173	2 ·783	4 ·347
		2d ,,	1,106	0	0	0	1	0	0	15	163	0	1	318	12	4	0	53	2	0	23	50	0	81	48	0	97	238				
	Died......	1st half.	20	0	0	0	0	0	0	0	6	0	0	1	0	1	0	2	0	0	0	1	0	0	3	0	1	5				
		2d ,,	30	0	0	0	0	0	0	2	14	0	0	1	2	0	0	4	0	0	0	0	0	0	2	0	0	5				
1831	Admitted.	1st half.	470	0	0	0	0	0	0	28	40	0	1	39	8	14	0	62	2	0	13	32	0	8	44	0	51	128	742	138 ·005	3 ·710	5 ·121
		2d ,,	554	0	0	0	10	0	0	48	60	0	0	93	12	2	0	42	4	0	26	29	0	33	21	0	9	165				
	Died......	1st half.	15	0	0	0	0	0	0	2	3	0	0	1	0	0	0	2	0	0	0	1	0	0	0	0	0	6				
		2d ,,	23	0	0	0	4	0	0	3	6	0	0	1	2	0	0	1	0	0	0	2	0	0	1	0	0	3				
1832	Admitted.	1st half.	764	1	0	0	17	0	0	46	91	0	6	87	38	2	0	49	4	0	10	37	0	70	53	0	50	203	1,244	197 ·749	7 ·073	13 ·987
		2d ,,	1.696	2	0	0	161	0	0	229	93	0	0	387	22	2	0	67	6	0	77	67	0	34	183	0	41	325				
	Died......	1st half.	33	1	0	0	10	0	0	2	10	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	7				
		2d ,,	141	2	0	0	103	0	0	5	10	0	0	2	5	0	0	5	0	0	0	1	0	0	4	0	0	4				
1833	Admitted.	1st half.	869	5	0	0	222	0	0	53	79	0	0	44	8	49	0	45	3	0	12	39	0	52	55	0	34	169	642	172 ·741	8 ·115	14·018
		2d ,,	240	1	0	0	8	0	0	18	18	0	0	12	10	7	0	26	0	0	9	34	0	12	18	0	5	62				
	Died......	1st half.	73	3	0	0	48	0	0	3	7	0	0	0	0	0	0	2	0	0	0	0	0	0	4	0	0	6				
		2d ,,	17	1	0	0	5	0	0	3	1	0	0	0	0	1	0	2	0	0	0	0	0	0	2	0	0	2				
1834	Admitted.	1st half.	392	3	2	0	2	4	18	8	21	0	3	44	6	0	0	36	2	0	13	38	0	47	32	0	37	76	1,204	183 ·712	2 ·893	5 ·315
		2d ,,	1,820	0	2	2	4	35	36	175	227	0	53	195	48	32	0	102	4	0	48	97	0	100	68	0	170	422				
	Died......	1st half.	15	2	0	0	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	2	0	0	5	0	1	1				
		2d ,,	49	1	0	0	1	0	1	7	16	0	0	2	0	1	0	3	0	0	0	4	0	0	4	0	2	7				
1835	Admitted.	1st half.	1,285	1	1	0	4	28	49	79	40	0	39	46	164	20	0	79	3	0	14	81	0	101	50	0	172	314	1,890	148 ·201	2 ·320	3 ·439
		2d ,,	1,516	2	1	0	10	33	32	56	108	0	33	64	88	14	2	79	1	0	20	88	0	263	52	1	134	435				
	Died......	1st half.	32	1	0	0	0	0	0	2	10	0	0	0	2	0	0	3	1	0	0	2	0	0	5	0	1	5				
		2d ,,	33	0	0	0	0	0	1	2	10	0	0	2	1	0	0	2	0	0	0	1	0	2	5	0	0	7				
1836	Admitted.	1st half.	971	4	6	0	4	16	16	53	45	0	22	40	23	3	0	75	1	0	31	102	0	136	39	0	77	278	1,554	124 ·646	2 ·684	3 ·316
		2d ,,	966	1	2	0	0	12	28	38	90	0	27	50	15	1	0	55	3	0	19	104	0	156	48	0	56	231				
	Died......	1st half.	24	3	0	0	0	0	1	2	8	0	0	0	1	0	0	5	0	0	0	1	0	0	2	0	0	1				
		2d ,,	28	1	0	0	0	0	0	2	8	0	0	1	0	0	0	2	0	0	0	2	0	0	9	0	0	3				
1837	Admitted.	1st half.	919	3	3	0	4	11	24	31	117	0	9	67	25	2	0	95	7	0	10	100	0	135	40	0	52	184	1,532	157· ·832	3 ·019	4 ·765
		2d ,,	1,499	3	0	0	12	41	20	93	137	0	15	124	18	2	0	105	5	0	40	161	0	220	80	1	94	328				
	Died......	1st half.	41	1	0	0	2	0	3	1	14	0	0	2	1	0	0	4	0	0	0	2	0	1	6	0	0	4				
		2d ,,	32	1	0	0	4	1	0	2	6	0	0	3	2	0	0	5	0	0	1	2	0	1	2	0	0	2				
1838	Admitted.	1st half.	986	2	2	0	23	11	27	75	66	0	15	54	23	0	0	70	0	0	21	147	0	128	68	0	39	215	1,222	138 ·461	3 ·727	5 ·155
		2d ,,	766	1	3	0	0	13	24	63	37	0	20	12	32	0	0	39	2	0	27	65	0	93	42	1	42	190				
	Died......	1st half.	44	0	0	0	13	0	2	1	3	0	0	3	0	0	0	3	0	0	0	1	0	1	8	0	0	9				
		2d ,,	19	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	3	7	0	0	6				

CENTRE DIVISION.

No. 23.—Europeans.—Abstract of the preceding Returns, shewing the Total number of Admissions, and Deaths, &c. from 1829 *to* 1838.

	Admissions and Deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	,, continued.	,, intermittent.	,, remittent.	Guinea Worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small pox.	Syphilis, &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & injuries.	Other Complaints.
Aggregate Strength. 12,402.																										
1829 to 1838. Admitted. 1st half.	8,553	20	14	0	286	70	134	450	760	0	95	658	336	133	0	708	34	0	222	716	0	757	464	0	687	2,009
1829 to 1838. Admitted. 2d half.	10,766	11	8	2	207	134	140	763	1,059	0	149	1,327	271	86	2	619	28	0	366	754	0	1,014	579	3	691	2,553
Total..	19,319	31	22	2	493	204	274	1,213	1,819	0	244	1,985	607	219	2	1,327	62	0	588	1,470	0	1,771	1,043	3	1,378	4,562
Died...... 1st half.	339	12	0	0	77	0	7	14	85	0	0	7	5	2	0	27	1	0	0	10	0	2	38	0	4	48
Died...... 2d half.	389	8	0	0	117	1	2	27	82	0	0	12	13	2	0	27	0	0	1	12	0	6	37	0	2	40
Total..	728	20	0	0	194	1	9	41	167	0	0	19	18	4	0	54	1	0	1	22	0	8	75	0	6	88
Average annual per centage of sick to strength.	155·773	0·249	0·177	0·016	3·975	1·644	2·209	9·780	14·666	0	1·967	16·005	4·894	1·765	0·016	10·699	0·499	0	4·711	11 852	0	14·279	8·409	0·024	11·111	36·784
Average annual per centage of deaths to sick treated.	3·768	64·516	0	0	39·350	0·490	3·284	3·380	9·180	0	0	0·957	2·965	1·826	0	4·069	1·612	0	0·170	1·496	0	0·151	7·190	0	0·435	1·928
Average annual per centage of deaths to strength.	5·870	0·161	0	0	1·564	0·008	0·072	0·330	1·346	0	0	0·153	0·145	0·032	0	0·435	0·008	0	0·008	0·177	0	0·064	0·604	0	0·048	0·709

CENTRE DIVISION.

Table No. 24.—Return of sick of the Native Troops, exhibiting the half yearly Admissions and Deaths from the principal Diseases, and those which have been either Epidemic or Endemic, during the period of ten years, from 1829 to 1838 inclusive.

Years.		Diseases.																													
		Admissions and Deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	,, continued.	,, intermittent.	,, remittent.	Guinea worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small Pox.	Syphilis, &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & Injuries.	Other Complaints.	Average strength each year.	Annual per centage of sick to strength.	Annual per centage of deaths to sick treated.	Annual per centage of deaths to strength.
1829	Admitted. 1st half.	1,553	1	0	0	40	0	0	43	9	0	0	25	274	73	0	1	2	0	23	248	0	85	15	0	101	613	6,902	43 ·827	2·479	1·086
	Admitted. 2d ,,	1,472	2	0	0	4	0	0	45	18	0	0	14	327	37	0	0	4	0	97	205	0	66	23	0	128	502				
	Died..... 1st half.	49	1	0	0	11	0	0	1	0	0	0	2	6	2	0	0	0	0	0	5	0	0	8	0	0	13				
	Died..... 2d ,,	26	1	0	0	1	0	0	5	1	0	0	1	5	0	0	0	0	0	0	3	0	0	2	0	0	7				
1830	Admitted. 1st half.	1,387	0	0	0	5	0	0	42	6	0	0	4	228	10	0	0	2	0	23	200	0	38	18	0	160	651	6,443	47 ·012	2·3 10	1·036
	Admitted. 2d ,,	1,642	1	0	0	0	0	0	33	11	0	40	7	407	4	0	1	5	0	72	145	0	38	16	0	199	663				
	Died...... 1st half.	36	0	0	0	4	0	0	7	0	0	0	0	5	5	0	0	0	0	0	1	0	0	5	0	0	9				
	Died...... 2d ,,	34	1	0	0	0	0	0	5	2	0	1	0	4	0	0	0	0	0	0	4	0	0	4	0	0	13				
1831	Admitted. 1st half.	1,603	1	0	0	91	0	0	44	21	0	111	10	131	12	0	0	5	0	20	205	0	54	5	0	160	733	6,036	46 ·090	3·666	1·689
	Admitted. 2d ,,	1,179	0	0	0	20	0	0	28	14	0	106	1	119	2	0	3	4	0	65	164	0	35	9	0	113	496				
	Died...... 1st half.	67	1	0	0	34	0	0	3	1	0	0	2	2	1	0	0	0	0	0	6	0	1	2	0	1	13				
	Died...... 2d ,,	35	0	0	0	11	0	0	2	1	0	0	0	4	0	0	1	0	0	1	1	0	0	2	0	1	11				
1832	Admitted. 1st half.	946	0	0	0	11	0	0	22	10	0	41	2	105	33	0	5	0	0	15	139	0	36	4	0	110	413	4,994	48 ·818	3·158	1·541
	Admitted. 2d ,,	1,492	0	0	0	29	0	0	36	34	0	98	50	246	105	0	6	4	0	67	157	0	41	12	0	149	458				
	Died...... 1st half.	30	0	0	0	5	0	0	0	2	0	0	0	0	0	0	0	0	0	0	6	0	0	1	0	0	16				
	Died...... 2d ,,	47	0	0	0	12	0	0	3	2	0	0	3	2	1	0	1	0	0	0	3	0	0	4	0	1	15				
1833	Admitted. 1st half.	1,304	1	0	0	96	0	0	67	22	0	47	12	141	50	0	4	6	0	47	107	0	43	9	0	142	510	5,505	49 ·627	5·197	2·579
	Admitted. 2d ,,	1,428	1	0	0	29	0	0	70	27	0	143	28	198	66	0	1	2	0	87	111	0	67	12	0	129	457				
	Died...... 1st half.	94	1	0	0	54	0	0	5	4	0	2	0	3	1	0	1	0	0	0	7	0	0	2	0	0	14				
	Died...... 2d ,,	48	0	0	0	11	0	0	2	7	0	0	0	4	0	0	0	0	0	0	6	0	2	6	0	0	10				
1831	Admitted. 1st half.	1,070	1	4	1	3	96	0	31	16	0	68	21	101	41	1	1	2	0	24	104	6	56	35	8	133	314	6,497	50 ·515	2·772	1·400
	Admitted. 2d ,,	2,212	2	12	4	1	128	0	58	37	0	292	14	460	95	0	1	2	0	47	199	1	126	33	0	187	513				
	Died...... 1st half.	30	1	0	0	1	0	0	2	1	0	0	1	1	0	0	0	1	0	0	6	0	1	6	0	0	9				
	Died...... 2d ,,	61	2	2	2	1	0	0	7	5	0	5	2	9	6	0	0	1	0	1	3	0	1	3	0	0	11				
1835	Admitted. 1st half.	1,821	3	12	2	0	185	0	36	19	0	171	13	333	83	3	2	8	0	67	191	7	72	30	1	159	424	7,574	54 ·832	1·998	1·095
	Admitted. 2d ,,	2,332	1	6	2	0	149	0	45	40	0	193	28	348	85	13	3	4	0	112	239	5	76	38	1	245	699				
	Died...... 1st half.	44	1	0	0	0	0	0	2	6	0	0	1	10	4	0	0	0	0	0	3	0	0	6	0	1	10				
	Died...... 2d ,,	39	1	5	1	0	0	0	4	5	0	0	1	9	3	0	0	0	0	0	0	0	1	1	0	0	8				
1836	Admitted. 1st half.	1,839	4	11	1	1	249	3	41	22	0	140	22	207	46	3	7	3	0	40	230	5	46	32	0	183	543	6,743	55 ·539	1·789	0·993
	Admitted. 2d ,,	1,906	0	7	6	2	136	1	45	41	0	131	17	204	17	2	3	1	0	258	201	1	64	46	1	187	535				
	Died...... 1st half.	43	4	2	1	0	1	2	5	3	0	0	2	2	1	0	1	0	0	0	4	0	0	4	0	2	9				
	Died...... 2d ,,	24	0	2	4	0	0	0	1	0	0	0	1	3	0	0	1	0	0	0	2	0	1	1	0	0	8				
1837	Admitted. 1st half.	2.090	0	24	2	102	275	0	55	34	0	133	17	282	23	40	1	5	0	33	223	1	62	21	1	177	579	7,100	50 ·577	3·397	1·718
	Admitted. 2d ,,	1,501	1	17	0	39	111	0	60	37	0	127	18	181	10	2	3	11	0	64	160	1	39	48	0	143	429				
	Died...... 1st half.	79	0	3	0	42	0	0	2	2	0	1	1	5	3	0	0	0	0	0	3	0	0	7	0	2	8				
	Died...... 2d ,,	43	0	3	0	16	1	0	3	2	0	0	1	2	1	0	0	0	0	0	1	0	0	7	1	2	3				
1838	Admitted. 1st half.	1,763	2	14	1	185	174	1	37	30	0	134	14	241	20	73	2	5	0	36	161	3	50	41	0	164	375	6,690	45 ·560	3·412	2·451
	Admitted. 2d ,,	1,285	0	10	1	6	64	2	51	20	0	222	14	126	8	6	0	2	0	91	141	3	43	30	0	151	294				
	Died...... 1st half.	130	2	6	1	82	0	0	2	2	0	0	1	6	2	1	0	0	0	0	2	0	1	8	0	2	12				
	Died...... 2d ,,	34	0	3	1	2	0	0	2	4	0	0	1	3	2	0	0	0	0	1	2	0	0	6	0	2	5				

CENTRE DIVISION.

No. 25.—*Natives.—Abstract of the preceding Returns, shewing the Total Number of Admissions and Deaths, &c. from* 1829 *to* 1838.

	Admissions and Deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	,, continued.	,, intermittent.
Aggregate Strength 61,484.													
1829 to 1838. Admitted. 1st half.	15,376	13	65	7	534	979	4	418	189	0	845	140	2,043
1829 to 1838. Admitted. 2d half.	16,449	8	52	13	130	588	3	471	279	0	1,352	191	2,616
Total...	31,825	21	117	20	664	1,567	7	889	468	0	2,197	331	4,659
1829 to 1838. Died...... 1st half.	602	11	11	2	233	1	2	29	21	0	3	10	40
1829 to 1838. Died...... 2d half.	391	5	15	8	54	1	0	34	29	0	6	10	45
Total...	993	16	26	10	287	2	2	63	50	0	9	20	85
Average annual per centage of sick to strength.	49·353	0·032	0·181	0·031	1·029	2·430	0·010	1·378	0·725	0	3·407	0·513	7·225
Do. do. of deaths to the sick treated.	3·120	76·190	22·222	50·000	43·222	0.127	28·571	7·086	10·683	0	0·409	6·012	1·824
Do. of deaths to strength.	1·539	0·024	0·010	0·015	0·445	0·003	0·003	0·097	0·077	0	0·013	0·031	0·131

	,, remittent.	Guinea worm.	Hepatic diseases.	Insanity.	Leprosy.	Opthalmy.	Rheumatism.	Small pox.	Syphilis, &c.	Thoracic diseases.	Ulcer, phagedenic.	Wounds & Injuries.	Other Complaints.
Aggregate Strength 61,484.													
1829 to 1838. Admitted. 1st half.	394	120	23	38	0	328	1,808	22	542	210	10	1,489	5,155
1829 to 1838. Admitted. 2d half.	429	23	21	39	0	960	1,722	11	595	257	2	1,6[illegible]1	5,046
Total...	823	143	44	77	0	1,288	3,530	33	1,137	477	12	3,120	10,201
1829 to 1838. Died...... 1st half.	19	1	2	1	0	0	43	0	3	49	0	8	113
1829 to 1838. Died...... 2d half.	13	0	3	1	0	3	25	0	5	36	1	6	91
Total...	32	1	5	2	0	3	68	0	8	85	1	14	204
Average annual per centage of sick to strength.	1·276	0·221	0·068	0·119	0	1·997	5·474	0·051	1·763	0·739	0·018	4·838	15·819
Do. do. of deaths to the sick treated.	3·888	0·699	11·363	2·597	0	0·232	1·926	0 000	0·703	17·819	8·333	0·448	1·999
Do. of deaths to strength.	0·049	0·001	0·007	0·003	0	0·001	0·105	0·000	0·012	0·131	0·001	0.021	0·316

CENTRE DIVISION.

No. 26.—*Table exhibiting the Number of Admissions and Deaths from each Class of Disease, for 5 years.*

EUROPEAN TROOPS.

CLASSES.	DISEASES.	1834 to 1838. Aggregate strength 7,402. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions and Deaths from each class of Disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Average annual per centage of sick to strength.	Average annual per centage of deaths to sick.
Fevers......	Febris ephemera	88	0	148	0								
	,, intermitt quot........	198	3	161	3	605	9	843	13	1,448	22	19 ·562	1 ·519
	,, tertiana	43	1	40	1								
	,, remittens...	25	0	49	1								
	,, continua....	251	5	445	8								
	Cholera.........	37	16	26	5	37	16	26	5	63	21	0 ·851	33 ·333
Diseases of the abdominal viscera.......	Dysenteria acuta	250	29	526	32	289	35	599	40	888	75	11 ·996	8 ·445
	,, chronica..	39	6	73	8								
	Diarrhœa.......	246	7	425	14								
	Colica..........	31	0	51	0								
	Obstipatio......	79	0	165	0								
	Hœmorrhois....	64	2	68	2								
	Enteritis........	10	3	12	1	537	12	818	17	1,355	29	18 ·305	2 ·140
	Peritonitis......	4	0	6	0								
	Gastritis........	4	0	4	0								
	Dyspepsia......	99	0	87	0								
	Hepatitis acuta	180	8	235	7	355	16	380	12	735	28	9 ·929	3 ·809
	,, chronica.	175	8	145	5								
Diseases of the Lungs and Heart.	Catarrhus......	98	2	151	8								
	Asthma........	28	3	15	1								
	Phthisis pulmonalis.........	25	14	17	8								
	Hœmoptysis....	4	0	7	1	229	26	290	27	519	53	7 ·011	10 ·211
	Pleuritis........	0	0	0	0								
	Pneumonia.....	34	2	61	5								
	Carditis........	2	0	7	0								
	Palpitatio.......	5	0	9	0								
	Dyspnœa.......	33	5	23	4								
Diseases of the Brain.	Apoplexia......	13	7	7	4								
	Epilepsia.......	24	1	31	2								
	Paralysis.......	22	1	24	1								
	Cephalalgia	63	0	89	1								
	Phrenitis.......	2	0	1	1								
	Ictus solis......	0	0	0	0	271	17	307	11	578	28	7 ·803	4 ·844
	Amentia........	8	0	9	0								
	Mania..........	5	1	6	0								
	Hydrophobia...	0	0	0	0								
	Delirium Tremens.........	52	6	51	2								
	Ebrietas........	82	1	89	0								
Diseases of the Eye..	Morbi oculorum.......	89	0	181	1	89	0	184	1	273	1	3 ·688	0 ·366
do. ,, Skin	,, cutis.......	70	0	134	1	70	0	134	1	201	1	2 ·756	0 ·490
Eruptive Fevers.......	Variola....	0	0	0	0								
	Varicella.......	0	0	0	0								
	Rubeola........	0	0	7	0	6	0	16	0	22	0	0 ·297	0 ·0
	Scarlatina......	1	0	0	0								
	Erysipelas......	5	0	9	0								
Dropsies....	Anasarca.......	14	2	16	5								
	Ascites.........	5	4	9	3	19	6	27	9	46	15	0 ·621	32 ·608
	Hydrothorax....	0	0	2	1								
Rheumatic affections.	Rheumatismus acutus........	165	1	195	2								
	,, chronicus.	503	7	320	7	469	8	520	9	989	17	13 ·361	1 ·718
	Neuralgia	0	0	0	0								
	Odontalgia.....	1	0	5	0								
Venereal affections...	Syphilis primitiva..........	167	1	284	0								
	,, consecutiva.	35	1	27	4								
	Gonorrhœa......	267	0	438	1								
	Hernia humoralis............	59	0	71	1	517	2	832	6	1,379	8	18 ·630	0 .580
	Strictura urethrac.........	19	0	9	0								
Specific diseases......	Atrophia.......	14	0	8	0								
	Beriberi........	0	0	2	0								
	Elephantiasis...	0	0	0	0								
	Lepra..........	0	0	0	0								
	Dracunculus....	0	0	2	0	32	1	37	0	69	1	0 ·932	1 ·449
	Ulcus phagedenicum........	0	0	3	0								
	Scrophula......	17	0	17	0								
	Scorbutus......	1	1	5	0								
Punishment.	Punitus........	38	0	30	0	38	0	30	0	68	0	0 ·918	0 ·0
Wounds and injuries ..	Fractura........	14	0	18	1								
	Luxatio........	9	0	15	0								
	Subluxatio.....	67	1	69	0								
	Vulnus sclopitorum........	11	0	8	0	377	2	496	2	873	4	11 ·794	0 ·458
	,, incisum...	49	0	55	1								
	Contusio.	204	1	313	0								
	Ambustio	23	0	1	0								
Other diseases including, Phlogosis, Ulcus, &c............		583	6	968	8	583	6	968	8	*1,551	+ 14	20 ·953	0 ·902
	Total......	4553	156	6507	161	4,553	156	6507	161	11,060	317	·149 ·419	2 ·866

Average per centage of deaths to strength during these five years has been 4·282.

* Of this number were
Phlogosis...............488 0
Do. do. Ulcers........493 1
Do. do. Bubo simplex..258 4

† The deaths under this head include besides these in the preceding note, 2 from aneurisma 1 from cachexia, 1 from diabetes, 1 from fistula in ano, 1 from icterus, 2 from splenitis and 1 from prolapsus ani.

CENTRE DIVISION.

No. 27.—Table exhibiting the Number of Admissions and Deaths from each Class of Disease, for 5 years.

NATIVE TROOPS.

CLASSES.	DISEASES.	From 1834 to 1838. Aggregate strength 34,604. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions & deaths from each class of disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Average annual per centage of sick to strength.	Average annual per centage of deaths to sick.
Fevers	Febris ephemera	646	1	965	5								
	,, intermittens quotid.	1095	20	1214	24	2113	41	2590	49	4703	90	13 ·590	1 ·913
	,, tertiana	69	4	105	2								
	,, remittens	216	10	215	12								
	,, continua	87	6	91	6								
	Cholera	291	125	48	19	291	125	48	19	339	144	0 ·970	42 ·477
Diseases of the abdominal viscera.	Dysenteria acuta	105	11	148	10	121	14	175	16	295	30	0 ·855	10 ·135
	,, chronica	16	3	27	6								
	Diarrhœa	200	13	259	17								
	Colica	96	1	[illegible]7	1								
	Obstipatio	63	0	88	1								
	Hæmorrhois	22	1	29	1	570	26	673	25	1243	51	3 ·592	4 ·102
	Enteritis	5	1	1	0								
	Peritonitis	0	0	0	0								
	Gastritis	0	0	2	0								
	Dyspepsia	184	10	217	5								
	Hepatitis acuta	8	1	7	0	13	1	10	1	23	2	0· 066	8 ·695
	,, chronica	5	0	3	1								
Diseases of the lungs and heart	Catarrhus	77	6	83	4								
	Asthma	32	6	49	2								
	Phthisis pulmonalis	17	9	11	6								
	Hœmoptysis	1	0	4	0								
	Pleuritis	0	0	0	0	158	31	192	18	351	49	1 ·014	13 ·000
	Pneumonia	13	5	25	5								
	Carditis	0	0	1	0								
	Palpitatio	1	1	0	0								
	Dyspnœa	17	4	20	1								
Diseases of the Brain.	Apoplexia	10	8	4	3								
	Epilepsia	15	0	9	3								
	Paralysis	18	6	20	0								
	Cephalalgia	52	1	51	0								
	Phrenitis	2	0	0	0								
	Ictus solis	0	0	0	0								
	Amentia	12	1	5	1	124	18	107	7	231	25	0 ·667	10 ·822
	Mania	11	0	15	0								
	Hydrophobia	0	0	0	0								
	Delirium tremens	4	2	3	0								
	Ebrietas	0	0	0	0								
Diseases of the Eye	Morbi Oculorum	200	0	572	2	200	0	572	2	772	2	2 ·230	0 ·259
do. do. Skin.	,, Cutis	979	1	588	1	979	1	588	1	1,567	2	4 ·523	0 ·127
Eruptive Fevers	Variola	22	0	11	0								
	Varicella	87	0	27	0								
	Rubeola	4	0	13	0	119	0	57	0	176	0	0 ·508	0 ·0
	Scarlatina	0	0	0	0								
	Erysipelas	6	0	6	0								
Dropsies	Anasarca	37	16	42	9								
	Ascites	4	1	4	2	42	18	48	13	90	91	0 ·260	91 ·444
	Hydrothorax	1	1	2	2								
Rheumatic affections.	Rheumatismus acutus	491	13	485	4								
	,, chronicus	418	5	455	4	938	18	955	8	1893	26	5 ·470	1 ·373
	Neuralgia	0	0	0	0								
	Odontalgia	29	0	15	0								
Venereal affections	Syphilis primitiva	116	0	163	1								
	,, consecutiva	28	1	24	1								
	Gonorrhœa	61	1	88	0	286	2	348	3	631	5	1 ·832	0 ·788
	Hernia humoralis	76	0	70	1								
	Strictura urethrae	5	0	3	0								
Specific diseases	Atrophia	65	11	52	15								
	Beriberi	7	2	13	8								
	Elephantiasis	0	0	0	0								
	Lepra	0	0	0	0								
	Dracunculus	120	1	23	0	217	14	115	28	332	42	0 ·959	12 ·650
	Ulcus phagedenicum	10	0	2	1								
	Scrophula	14	0	21	3								
	Scorbutus	1	0	4	1								
Punishment.	Punitus	12	0	28	0	12	0	28	0	40	0	0 ·115	0 ·0
Wounds and Injuries	Fractura	20	1	18	1								
	Luxatio	4	0	12	0								
	Subluxatio	66	0	81	1								
	Vulnus selopitorum	10	2	8	0	816	7	913	4	1729	11	4 ·996	0 ·636
	,, incisum	88	1	150	1								
	Contusio	582	2	612	1								
	Ambustio	36	1	32	0								
Other diseases, including phlogosis, ulcus, &c.		1584	10	1816	7	1584	10	1816	7	* 3400	+ 17	9 ·825	0 ·500
	Total	8583	326	9236	201	85[illegible]3	326	9236	201	17,819	527	51 ·494	2 ·957

Average per centage of deaths to strength during these five years has been 1·811.

* Of this number were
Phlogosis 1740 4
Do. do. Ulcers .... 11[illegible]2 2
Do. do. Bubo simplex 224 0

+ The deaths under this head include besides those in the preceding note, one from apostema lumborum, 1 from cynanche tonsillaris, 1 from dysuria, 1 from hoematemesis, 1 from hernia, one from cachexia syphiloidea, 2 from tetanus, 1 from hydarthrus and 1 from polypus nasi.

CENTRE DIVISION.

No. 28.—*Table exhibiting the Number of Admissions and amount of mortality, from the most particular diseases amongst both European and Native Troops, in the Centre Division of the Army during the period of ten years, from 1829 to 1838 inclusive, with the proportion each bears to the total number of Admissions and Deaths; the contrast in several of the columns of disease between the European and Native sick is very remarkable.*

		Cholera.		Fever.		Dysentery.		Hepatitis.		Diarrhœa.		Thoracic diseases.		Rheumatism.		Syphilis.		Total from these diseases.	
		Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.
Europeans.																			
Total Admissions....	19,319	493	$\frac{1}{39}$	3,055	$\frac{1}{6}$	1,819	$\frac{1}{10}$	1,327	$\frac{1}{14}$	1,213	$\frac{1}{16}$	1,043	$\frac{1}{18}$	1,470	$\frac{1}{13}$	1,771	$\frac{1}{11}$	12,191	$\frac{12}{19}$
,, Deaths........	728	194	$\frac{1}{4}$	41	$\frac{1}{18}$	167	$\frac{1}{4}$	54	$\frac{1}{13}$	41	$\frac{1}{18}$	75	$\frac{1}{9}$	22	$\frac{1}{33}$	8	$\frac{1}{91}$	602	$\frac{9}{11}$
Natives.																			
Total Admissions....	31,825	664	$\frac{1}{48}$	8,010	$\frac{1}{4}$	468	$\frac{1}{68}$	44	$\frac{1}{723}$	889	$\frac{1}{36}$	477	$\frac{1}{66}$	3,530	$\frac{1}{9}$	1,137	$\frac{1}{28}$	15,219	$\frac{1}{2}$
,, Deaths........	993	287	$\frac{1}{3}$	146	$\frac{1}{7}$	50	$\frac{1}{20}$	5	$\frac{1}{198}$	63	$\frac{1}{16}$	85	$\frac{1}{11}$	68	$\frac{1}{14}$	8	$\frac{1}{124}$	712	$\frac{5}{7}$

No. 29.—*The following Table further exhibits the per centage of Admissions from these diseases to the strength; of deaths to the sick treated, and the per centage of deaths to strength; it also shows the difference amongst European and Native sick in these respects.*

	Cholera.		Fever.		Dysentery.		Hepatitis.		Diarrhœa.		Thoracic diseases.		Rheumatism.		Syphilis.		Total from these diseases.	
	Ad. & deaths.	Per-centage.	Ad. & deaths.	Per-centage.	Ad. & deaths.	Per-centage.	Ad. & deaths.	Per-centage.	Ad. & deaths.	Per-centage.	Ad. & deaths.	Per-centage.	Ad. & deaths.	Per-centage.	Ad. & deaths.	Per-centage.	Ad. & deaths.	Per-centage.
European Troops. STRENGTH, 12,402.																		
Per centage of Admissions to strength..........	493	3·975	3055	24·633	1819	14·666	1327	10·699	1213	9·780	1043	8·409	1470	11·852	1771	14·279	12,191	98·297
,, of Deaths to sick treated..	194	39·350	41	1·309	167	9·180	54	4·069	41	3·380	75	7·190	22	1·496	8	0·451	602	4·938
,, of Deaths to strength....	194	1·564	41	0·330	167	1·346	54	0·435	41	0·330	75	0·604	22	0·177	8	0·064	602	4·854
Native Troops. STRENGTH, 64,484.																		
Per centage of Admissions to Strength	664	1·029	8010	12·421	468	0·725	44	0·068	889	1·378	477	0·739	3530	5·474	1137	1·763	15,219	23·601
,, of Deaths to sick treated.	287	43·222	146	1·822	50	10·683	5	11·363	63	7·086	85	17·819	68	1·926	8	0·703	712	4·678
,, of Deaths to Strength....	287	0·445	146	0·226	50	0·077	5	0·007	63	0·097	85	0·131	68	0·105	8	0·012	712	1·104

CENTRE DIVISION.

No. 30.—*Table shewing the amount of diseases and deaths from the principal classes of disease during five years, from 1834 to 1838 inclusive, with the proportion of admissions from each to the total of sick treated, and of deaths to the total mortality.*

	Fevers. Ad. & deaths.	Fevers. Prop.	Cholera. Ad. & deaths.	Cholera. Prop.	Dysentery. Ad. & deaths.	Dysentery. Prop.	Abdominal complaints. Ad. & deaths.	Abdominal complaints. Prop.	Diseases of the Liver. Ad. & deaths.	Diseases of the Liver. Prop.	Diseases of the Lungs. Ad. & deaths.	Diseases of the Lungs. Prop.	Diseases of the Brain. Ad. & deaths.	Diseases of the Brain. Prop.	Dropsies. Ad. & deaths.	Dropsies. Prop.	Rheumatic affections. Ad. & deaths.	Rheumatic affections. Prop.	Venereal complaints. Ad. & deaths.	Venereal complaints. Prop.
European Troops.																				
Total Admissions.... 11,060	1448	$\frac{1}{8}$	63	$\frac{1}{175}$	888	$\frac{1}{12}$	1355	$\frac{1}{8}$	735	$\frac{1}{15}$	519	$\frac{1}{21}$	578	$\frac{1}{19}$	46	$\frac{1}{240}$	989	$\frac{1}{11}$	1379	$\frac{1}{8}$
,, Deaths........ 317	22	$\frac{1}{14}$	21	$\frac{1}{15}$	75	$\frac{1}{4}$	29	$\frac{1}{11}$	28	$\frac{1}{11}$	53	$\frac{1}{6}$	28	$\frac{1}{11}$	15	$\frac{1}{21}$	17	$\frac{1}{19}$	8	$\frac{1}{39}$
Native Troops.																				
Total Admissions.... 17,819	4703	$\frac{1}{4}$	339	$\frac{1}{52}$	296	$\frac{1}{60}$	1243	$\frac{1}{14}$	23	$\frac{1}{775}$	351	$\frac{1}{61}$	231	$\frac{1}{77}$	90	$\frac{1}{198}$	1893	$\frac{1}{9}$	634	$\frac{1}{28}$
,, Deaths 527	90	$\frac{1}{6}$	144	$\frac{1}{3}$	30	$\frac{1}{30}$	51	$\frac{1}{10}$	2	$\frac{1}{263}$	49	$\frac{1}{11}$	25	$\frac{1}{21}$	31	$\frac{1}{17}$	26	$\frac{1}{20}$	5	$\frac{1}{105}$

No. 31.—*Table exhibiting the per centage of Admissions from the same Classes of disease to the strength, of deaths to sick treated, and of deaths to strength, both amongst European and Native Troops.*

	Fevers. Ad. & deaths.	Fevers. Per-cent-age.	Cholera. Ad. & deaths.	Cholera. Per-cent-age.	Dysentery. Ad. & deaths.	Dysentery. Per-cent-age.	Abdominal complaints. Ad. & deaths.	Abdominal complaints. Per-cent-age.	Diseases of the Liver. Ad. & deaths.	Diseases of the Liver. Per-cent-age.	Diseases of the Lungs. Ad. & deaths.	Diseases of the Lungs. Per-cent-age.	Diseases of the Brain. Ad & deaths.	Diseases of the Brain. Per-cent-age.	Dropsies. Ad. & deaths.	Dropsies. Per-cent. age.	Rheumatic affections. Ad. & deaths.	Rheumatic affections. Per-cent-age.	Venereal complaints. Ad. & deaths.	Venereal complaints. Per-cent-age.
European Troops. STRENGTH, 7,402.																				
Per centage of sick to strength.	1448	19·562	63	0·851	888	11·996	1355	18·305	735	9·929	519	7·011	578	7·808	46	0·621	989	13·361	1379	18·630
,, of deaths to sick.......	22	1·519	21	33·333	75	8·445	29	2·140	28	3·809	53	10·211	28	4·844	15	32·608	17	1·718	8	0·580
,, of deaths to strength...	22	0·297	21	0·283	75	1·013	29	0·391	28	0·378	53	0·715	28	0·378	15	0·202	17	0·229	8	0·106
Native Troops. STRENGTH, 34,604.																				
Per centage of sick to strength.	4703	13·590	339	0·979	296	0·855	1243	3·592	23	0·066	357	1·014	231	0·667	90	0·260	1893	5·470	634	1·832
,, of deaths to sick......	90	1·913	144	42·477	30	10·135	51	4·102	2	8·695	49	13·960	25	10·822	31	34·444	26	1·373	5	0·788
,, of deaths to strength...	90	0·260	144	0·416	30	0·086	51	0·147	2	0·005	49	0·141	25	0·072	31	0·089	26	0·075	5	0·014

VACCINATION ESTABLISHMENT.

A short account of the vaccination establishment under the Madras Presidency.

Vaccination was first introduced into India under the auspices of the Right Honorable Lord Clive, in the year 1802, and has been fully established at this Presidency for a period of 41 years. Considerable changes, and improvements have taken place in the department from time to time; the principal of which has been substituting a fixed rate of monthly pay, for the native vaccinators, in place of head money at first allowed according to the numbers vaccinated; the following extracts from the regulations on this subject, furnish a detailed statement of the system under which the department is at present conducted; the measures in force to extend the blessings of vaccination to the population generally; and to insure the efficient performance of the duties of the native practitioners.

"The department of vaccination is conducted by the superintending surgeons of divisions, subject to the immediate authority, and control, of the medical board."

"The medical officers specially nominated by government as local superintendents of vaccination, at the stations of circuit and zillah courts, and other fixed situations, together with the establishments of native vaccinators, are under the immediate authority of the superintending surgeons of divisions, in all matters relating to vaccination. The local superintendents correspond with them, and submit to them their monthly reports for the information of the medical board."

"It is the duty of the local superintendents to practice vaccination themselves, and to promote its diffusion amongst the native population by every means in their power. They superintend the operations of the native vaccinators, and are required to encourage and stimulate,

"them to exertion; to afford them the utmost possible facility; while they are not to neglect to keep a strict and vigilant watch over them, nor to omit any practicable means of checking and verifying their monthly registers, and reports. For these purposes, as well as by examining the nature and character of the disease kept up, to judge whether the *Virus* be genuine or not, occasional personal inspection is absolutely necessary. It is, therefore, to be considered as an essential principle of the duty of superintendence, that the local superintendents, shall, from time to time personally inspect the operations of the vaccinators, in whatever parts of their respective districts they may be employed; and it is competent for the superintending surgeon, under the authority of the medical board, to direct the performance of this duty, when not interfering with any other of a more urgent description."

"It being desirable, in many respects, and especially in the ultimate view of devolving on the natives themselves the preservation of the vaccine disease, and trusting its general use and diffusion to their unaided exertions, that the practice should fall into the hands of the native practitioners, such only are to be selected to fill the places of vaccinators. An exception, however, may be made to this rule in favour of the sons, or immediate relations, of old vaccinators now in employ, and of approved zeal and ability. The vaccinators are to be selected with strict reference to the caste and description of natives amongst whom they are to be placed, and, whenever practicable, should belong to that country."

"Vaccinators are appointed, or removed, under the authority of the superintending surgeon with the sanction of the medical board; and no local superintendent is to remove or appoint any vaccinator of his own authority, nor, on any pretence, to employ them as dressers, or medical servants. When a vaccinator is accused of misconduct in his public capacity, or of any offence, in his private character, affecting his eligibility to hold a public office, he should be brought by the local superintendent before

" the magistrate, or zillah judge, as the case may be, in all " instances, where the offence alleged, comes fairly under the " cognizance of legal authority. The decree or sentence " thereupon will be communicated to the local superinten- " dent, for the information of the superintending surgeon, " and the medical board. But when imputations or objec- " tions involve considerations merely of a professional nature, " the circumstances are to be submitted to the superintend- " ing surgeon."

" As an encouragement to the poorer classes of natives to " come forward with their children to be vaccinated at pub- " lic depôts, and thereby to secure an unfailing supply of " genuine vaccine virus, by an uninterrupted succession of " inoculations under the immediate observation of the super- " intendents, government has sanctioned the gratuitous is- " sue of rice to such subjects, at the Presidency, Masulipa- " tam, Trichinopoly and Tellicherry. Rice for this purpose " is furnished by the Commissariat."

" As the general and successful practice of vaccine inocu- " lation is an object of great public interest; and as the col- " lectors of revenue are peculiarly enabled, by their local " knowledge, their authority, and their public servants, to " encourage this practice, and to detect fraud or neglect of " duty on the part of the native vaccinators; these authori- " ties are required to promote, by every means in their pow- " er, the propagation of this valuable discovery."

" The local superintendent will accordingly furnish the " collector of the district with a nominal list of his esta- " blishment of vaccinators, stating in what talooks and vil- " lage each is employed; and he will also notify to the col- " lector such changes in these respects as may, from time to " time, take place. It will then be the duty of the collector, " by means of his public servants, to observe the conduct of " these people, and to explain to the inhabitants, as occasion " offers, the nature of their occupation. He will cause the

"tahsildars and village curnums to make themselves ac-
"quainted with the proceedings of the vaccinators, and to
"countersign the monthly registers of inoculations kept by
"them, in proof of their veracity."

"These registers, thus countersigned and certified, being
"received by the local superintendent, he will prepare from
"them an abstract return for transmission to the superin-
"tending surgeon, copy of which he will likewise furnish to
"the collector. The original registers and reports of the
"vaccinators are then to be placed amongst the public re-
"cords of the collector's cutcherry, in order that reference
"may be had to them at any future time, should occasion
"require; and collectors of revenue are hereby according-
"ly required to receive and preserve them."

The following is a list of the Vaccination Establisment.

STATIONS.	Local superintendents.	Number of vaccinators.
Madras	3	13
Poonamallee	1	4
Chingleput	1	6
Cuddalore	1	4
Verdachellum		4
Vellore	1	4
Chittoor	1	8
Nellore and Ongole	1	6
Guntoor	1	4
Gangam	1	3
Vizagapatam	1	5
Ingeram and Madepollam	1	4
Rajahmundry		4
Masulipatam	1	4
Negapatam	1	4
Combaconum	1	4
Tanjore	1	4
Trichinopoly	1	4
Salem	1	4
Coimbatore	1	4
Dindigul		4
Madura	1	4
Ramnad		4
Tinnevelly	1	4
Cochin	1	4
Travancore	1	4
Onore	1	4
Mangalore		4
Cannanore	1	4
Tellicherry	1	7
Calicut	1	4
Augadiporam		3
Bangalore	1	4
Mysore Province	1	1
Cuddapah	1	4
Bellary	1	4
Kurnool	1	2
Total.	33	162

With the view of preventing native vaccinators from falling into careless, or negligent habits, which they are apt to do when away for any length of time from the immediate control of the European officers, they are occasionally removed from one part of their district to another, so that each individual may come under the *surveillance* of the local superintendent in turn: and they are likewise strictly prohibited under pain of dismissal from the service, from engaging in trade or agriculture. In cases of misconduct, or neglect of duty, the vaccinators are either subjected to dismissal from the service, or stoppage of pay, the latter punishment is however but seldom resorted to.

Superintending and executive medical officers having been called on by the medical board, in 1838, to increased exertion in extending the benefits of vaccination, a progressive increase in the numbers annually vaccinated has since taken place; and in the year 1839, instructions were issued by the board directing that the entire of the medical subordinates, whether in the civil or military departments, should in future be obliged to qualify themselves in a knowledge of the disease, with a view to its more extensive dissemination; and in addition to the labours of the regular vaccination establishment, the prophylactic is now regularly kept up in the army, and amongst its numerous followers; every soldier or sepoy not having unequivocal marks of having had either small pox or cow pox, being vaccinated when first entertained; and their families are encouraged, to bring forward their children to be vaccinated. The system in operation throughout this presidency, may therefore be confidently stated to be in every respect efficient, and to be conducted with vigour.

As regards the estimation in which vaccination is held by the population of the Madras territories, it may be stated, that as the operation of inoculating with the matter of small pox has been practised throughout various parts of the presidency by native doctors, from time immemorial; and as the modern operation with the cow pox virus, is so perfectly

similar to that, to which they have been always accustomed, the natives in general see no distinction between the two diseases, and consequently have no prejudice against vaccination. In some of the regiments of native cavalry and in the horse artillery, consisting chiefly of mahomedans, the sepoys are more unwilling, perhaps from their habits of privacy, to bring their families forward for the purposes of vaccination, than other classes of the people; with this exception, the only other difficulty to be contended against in this part of India, is the general apathy of the natives regarding matters of the kind, except when under the influence of fear, on the breaking out of epidemic small pox and there is every reason to be satisfied with the result of the system of vaccination under this presidency, where it has proved a blessing to hundreds of thousands of the inhabitants.

A general table is here given, shewing the progress of vaccination from May 1807, to the end of the year 1840, with the expense of the establishment.

Statement shewing the progress of Vaccination under the Government of Fort St. George, with the number of persons vaccinated and the amount of expense incurred, from May 1807 *to April* 1810.

Years.	The Presidency, and Centre Division. Number of persons vaccinated.	Expense of vaccine Establishment.	Contingent charge of vaccine establishment.	Total expense of vaccine establishment.	Rate of expense for vaccinating every 100 persons.			Out Stations. Number of persons vaccinated.	Total expense of vaccine establishment.	Rate of expense for vaccinating every 100 persons.			Grand Total. Number of persons vaccinated.	Total expense of vaccine establishment.	Total contingent charge of vaccine establishment.	Total expense of vaccine establishment.	Rate of expense for vaccinating 100 persons.		
		Rupees.	Rupees.	Rupees.	Rs.	A.	P.		Rupees.	Rs.	A	P.		Rupees.	Rupees.	Rupees.	Rs.	A	P.
1807	41,671	20,833	1,474	35,707	85	11	0	2,24,597	41,664	18	8	9	2,66,268	62,597	14,774	77,371	29	0	11
1808	31,655	20,933	707	21,604	68	5	9	1,82,476	45,108	24	11	6	2,14,131	66,041	707	66,748	31	2	8
1809	24,935	20,933	1,113	22,046	88	6	7	1,39,183	41,916	30	1	10	1,64,118	62,649	1,113	63,962	38	15	6
1810	25,535	24,150	2,948	27,098	106	0	7	1,29,317	45,864	35	7	5	1,54,872	70,014	2,948	72,962	47	1	9

Statement exhibiting the number of persons vaccinated and the amount of expense incurred, from May 1811 *to April* 1829.

Presidency.

Years.	Number of persons vaccinated.	Vaccine establishment.	Contingent charges.			Total.			Rate of expense for vaccinating 100 persons.		
		Rupees.	Rs.	A	P.	Rs.	A	P.	Rs.	A	P.
1811	18,314	8,291	7,038	0	0	15.329	0	0	83	11	2
1812	23,964	8.232	17,265	0	0	25,497	0	0	106	6	4
1813	28,424	11,193	7,035	0	0	18,278	0	0	61	4	10
1814	28,219	11,193	8,291	0	0	19.484	0	0	68	15	6
1815	27,942	11,193	7,371	0	0	18,564	0	0	65	7	0
1816	23,853	11,192	4,798	0	0	15,991	0	0	67	7	10
1817	22,797	11,193	4,936	0	0	16,129	0	0	70	12	0
1818	23,906	11,193	4,464	0	0	15,657	0	0	65	7	10
1819	22,525	10,983	4,851	0	0	15,348	0	0	70	4	8
1820	20,198	11,67	4,073	0	0	15,746	0	0	77	15	4
1821	13,253	11,883	2,923	0	0	14,805	0	0	111	11	4
1822	12,563	11,672	2,731	5	9	14,403	5	9	114	10	4
1823	12,204	11,757	2,564	0	0	14,321	0	0	117	5	6
1824	22,668	12,177	3,022	0	0	15,199	0	0	67	0	9
1825	13,506	12,177	6,468	0	0	18,645	0	0	138	0	9
1826	12.500	12,177	3,385	0	0	155,62	0	0	124	7	11
1827	12,562	11,964	3,467	0	0	15,431	0	0	122	13	5
1828	12,527	11,673	2,360	0	0	14,033	0	0	112	0	4
1829	7,266	5,670	1,194	0	0	6,864	0	0	94	7	6

Out Stations including Centre Division.

Years.	Numbers of persons vaccinated.	Vaccine establishment.	Contingent charges.			Total charge.			Rate of expense for vaccinating 100 persons.		
		Rupees.	Rs.	A	P.	Rs.	A	P.	Rs.	A	P.
1811	1,29,146	53,088	0	0	0	53,088	0	0	41	1	8
1812	1,30,908	54,306	0	0	0	54,306	0	0	41	7	8
1813	1,49,896	54,264	643	0	0	54,907	0	0	36	10	0
1814	1,59,638	54,726	605	0	0	55,331	0	0	34	10	6
1815	1,42,980	55,482	170	0	0	55,652	0	0	38	14	9
1816	1,30,253	54,978	366	0	0	55,344	0	0	42	7	10
1817	1.35,634	55,356	294	0	0	55,650	0	0	41	0	5
1818	1,23,824	54,305	286	0	0	54,592	0	0	44	1	4
1819	1,14,543	53,592	264	0	0	53,856	0	0	47	0	3
1820	1,08,327	54,306	177	0	0	54,483	0	0	50	4	8
1821	1,03,057	53,382	230	0	0	53,612	0	0	52	0	4
1822	93,578	52,752	0	0	0	52,752	0	0	56	5	11
1823	90,471	54,055	548	0	0	54,603	0	0	60	5	7
1824	1,17,435	53,508	439	0	0	53,947	0	0	45	15	0
1825	1,08,860	54,852	358	0	0	55.210	0	0	50	11	5
1826	1,06,219	54,852	381	0	0	55,233	0	0	51	15	11
1827	1,07,014	54,852	291	0	0	55,143	0	0	51	8	5
1828	1,11,676	54,852	248	4	7	55,100	4	7	49	5	5
1829	1.04,8 6	55,608	308	12	2	55.916	12	2	53	5	0

Grand Total.

Years.	Total number of persons vaccinated.	* Expense of vaccine establishment.	Contingent charges.			Total expense.			Rate of expense for vaccinating 100 persons.		
		Rupees.	Rs.	A	P.	Rs.	A	P.	Rs.	A	P.
1811	1,47,460	61,379	7,038	0	0	68,417	0	0	46	6	1
1812	1,54,872	62,538	17,265	0	0	79,803	0	0	51	3	6
1813	1,78,320	65,457	7,728	0	0	73,185	0	0	41	0	8
1814	1,87,887	65,919	8,896	0	0	74,815	0	0	39	13	1
1815	1,70,922	66,675	7,541	0	0	74,216	0	0	43	6	8
1816	1,54,106	66,171	5,164	0	0	71,335	0	0	40	4	7
1817	1,58,431	66,549	5,230	0	0	71,779	0	0	45	4	10
1818	1,47,730	65,499	4,750	0	0	70,249	0	0	47	8	10
1819	1,37,068	64,575	5'115	0	0	69,690	0	0	50	13	5
1820	1,28,525	65,979	4,250	0	0	70,229	0	0	54	10	3
1821	1,16,310	65,264	3,153	0	0	68,417	0	0	58	13	4
1822	1,06,141	64,424	2,731	5	9	67,155	5	9	63	4	3
1823	1,02,675	65.812	3,112	0	0	68,924	0	0	67	2	0
1824	1,40,103	65,685	3,461	0	0	69,146	0	0	49	5	7
1825	1,22,366	67,029	6,8 6	0	0	73,855	0	0	60	5	8
1826	1,18,719	67,029	3,766	0	0	70,795	0	0	59	10	1
1827	1,19,576	66,816	3,758	0	0	70,574	0	0	59	0	1
1828	1,24,203	66,525	2,608	4	7	69,133	4	7	55	10	6
1829	1,12,142	61,278	1,502	12	2	62,780	12	2	52	15	8

Table exhibiting the number of persons vaccinated from the years 1830 *to* 1840, *inclusive.*

Years.	Christians. Males.	Christians. Females.	Hindoos. Male.	Hindoos. Females.	Mahomedans. Males.	Mahomedans. Females.	Total. Males.	Total. Females.	GrandTotal.	In the Presidency Division.	Other Districts.	Total expence of vaccine establishment.		
												Rs.	A	P.
1880	4,427	3,677	61,133	48,313	6,035	3,645	71,595	55,635	1,27,230	7,663	1,19,567	69,267	3	0
* 1831	4,582	3,828	47,919	39,327	5,511	3,364	58,012	46,519	1,04,531	5,761	98,770	60,147	8	0
1832	4,405	3,636	45,872	37,031	5,168	3,281	55,445	43,948	99,393	6,477	92,416	64,372	7	0
1833	4,456	3,817	52,788	44,221	5,083	3,384	62,327	51,422	1,13,749	20.255	93,494	79,792	9	0
+ 1834	3,848	3,331	43,990	36,342	5,104	3,382	52,942	43,058	96,000	9,906	86,094	67,157	14	0
1835	3,273	2,736	41,083	33,955	5,039	3,182	49,395	39,873	89,268	8.853	80,415	37,537	4	0
1836	3,501	2,928	41,383	34,232	4,873	2,785	49,757	39,945	89,702	8,571	81,131	37,513	11	0
1837	3,371	2,976	40,951	33,141	4,650	2,593	48,972	38,710	87,682	8,428	79,254	38,840	7	0
1838	4,145	3,340	45,482	36,774	5,530	3,478	55,157	43,592	98,749	8,855	89,894	40,598	12	0
1839	4,293	3,462	58,266	46,331	6,749	3,973	69,308	53,766	123,074	9,341	1,13,733	39,020	4	0
1840	4,408	4,426	62,675	50,.92	6,133	3,956	73,216	58,674	131,890	9,439	1,22,451	39,801	8	0

* The pay of the native vaccinators was reduced in this year from 5 to 4 pagodas *per mensem*, in the 1st class, and from 4 to 3 pagodas in the 2d class. Resolution of Government 25th October 1831.

+ In this year the monthly allowance of 52 Rs. 8 Annas granted to Local Superintendents of Vaccination was discontinued, and 20 Rupees *per mensem* given in lieu thereof, was declared to be included in the consolidated fixed salaries of Civil Surgeons. G. O. G, August 1835.

A table is here given shewing the number vaccinated in each of the districts, in the centre division, from 1829 to 1838 inclusive. Also the number of vaccinators in each district.

CENTRE DIVISION.

Table shewing the Number of Persons successfully vaccinated, from 1829 to 1838 inclusive.

DISTRICT OR STATIONS.	Population, in 1837.		Class and sex of Patients.						Total vaccinated.	
			Christians.		Hindoos.		Mahomedans.			
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
ellore including Ongole....	1,64,783	1,51,565	107	78	22,201	18,900	1261	889	23,569	19,867
ıntoor including Palnaud.	1,35,5[illegible]2	1,19,320	56	62	15,861	14,807	1099	971	17,016	15,810
orth Arcot................	2,65,213	2,54,774	3079	2008	19,181	13,947	5320	3331	27,580	19,286
uth Arcot................	2,53,164	2,32,250	1540	1387	13,962	11,830	761	629	16,263	13,846
ingleput................	1,74,471	1,61,924	1672	1377	17,878	14,883	722	525	20,272	16,785
Grand Total......	9,93,213	9,19,833	6454	4912	89,083	74,367	9163	6345	1,04,700	85,621

Number of Vaccinators in each District.

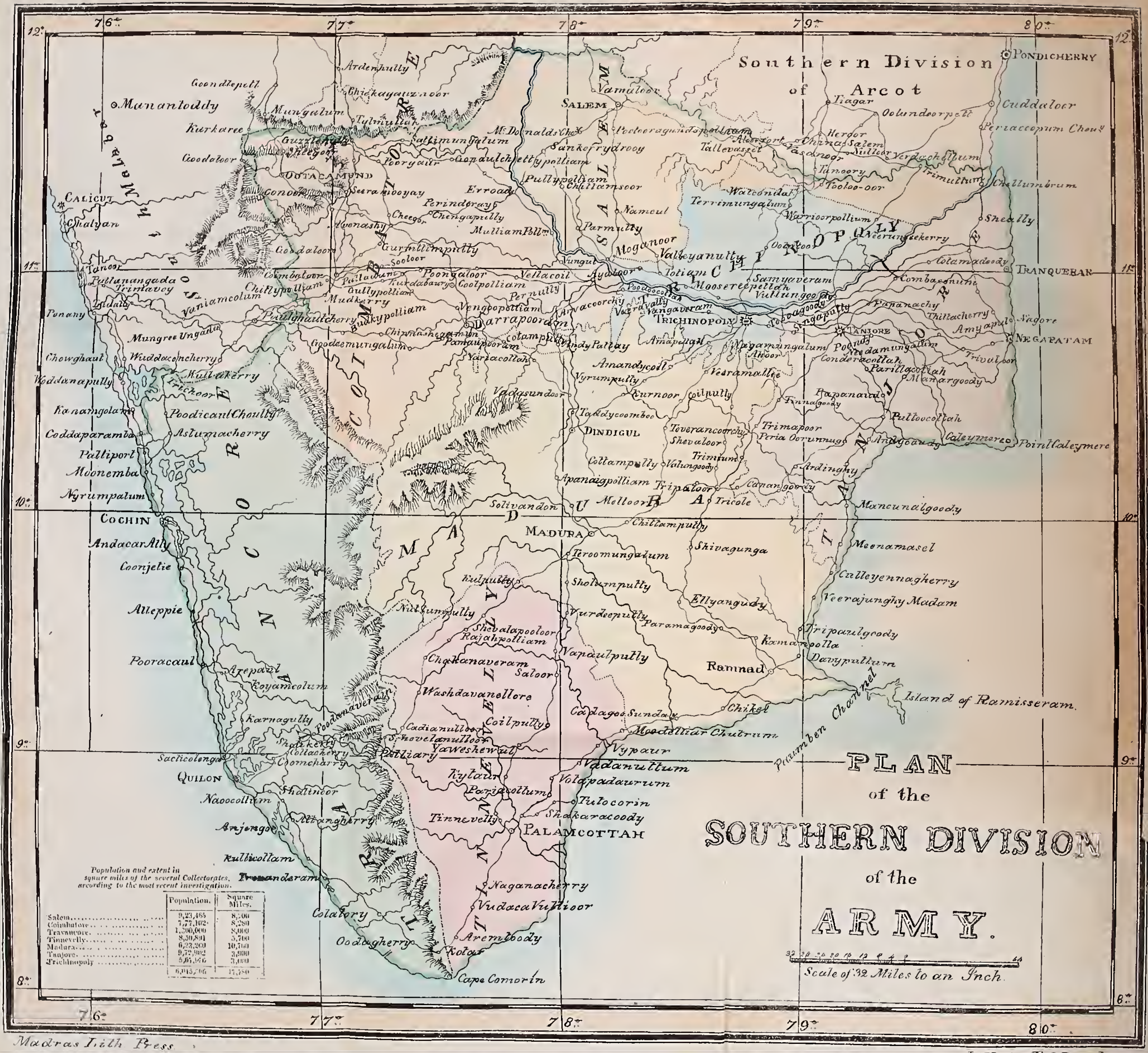
	1st Class Vaccinators.	2d Class Vaccinators.
ellore and Ongole........................	1	5
ıntoor and Palnaud........................	1	3
orth Arcot................................	3	9
uth Arcot................................	2	6
ingleput................................	7	3
Total......	14	26

The number vaccinated in this Division during these ten years is 190324; the whole expense in-
red amounts to Rupees 87,78[illegible], which gives an average of somewhat more than 46 Rupees per hun-
d, or eleven pence per head in English money.

CENTRE DIVISION.

Statement shewing the extent of accommodation in the Jails in the Centre Division, the Diet of the Prisoners, Clothing, Employment and Hours of labour.

STATION.	Number of Prisoners the prison is capable of containing, in separate sleeping cells.	Number of Prisoners the prison is capable of containing, where more than one prisoner sleeps in one cell.	Dietary or other weekly allowance, and weekly cost per head.	Allowance of clothing and bedding, and cost per head.	Description of employment and hard labour.	Hours of labour.
NELLORE.	No separate sleeping cells.	23 cells, capable of containing 750 Prisoners.	1 seer of rice with condiments—2 cash for vegetables. As. P. Cost....... 5 5	2 cloths and 1 cumbly anuual. Rs. A. P. Cost.... 1 12 0	Erecting public buildings, making iron, &c. tradesmen work at their trades.	From 8 to 12 A. M. ,, 1 to 5 P. M.
GUNTOOR.	No separate sleeping cells.	Capable of containing about 500 prisoners.	6 Seers of Cholum, and 1 seer of rice—2 As. 4 Pice in condiments, &c. As. P. Cost.... 4 7¾	1 Cumbly 1 Mat, 6 yds. of cloth annually. Rs. A. P. Cost.... 1 6 7	Working on the roads—repairing and digging new wells.	From 8 A. M. till 4—30 P. M. in the months of May, June and July till 3—30 P. M.
CHITTOOR.	The prison is divided into large apartments, capable of containing 700 to 800. prisoners: has 2 cells, one for the highest crimes, the other for separate retention.	Is answered in the preceding column.	Male convicts 80 Rs. weight rice daily. Female do. 70 do. do. As. P. Cost per head.. 5 3	2 Cloths and 1 cumbly annually, no bedding, mats discontinued. Rs. A. P. Cost.... 1 7 0	Working on the roads—tradesmen work at their trade.	From 6 to 12 A. M. ,, 2 to 5 P. M.
CUDDALORE.	26	580	Rs. A. P. 0 11 11 including cost of guards, Peons, &c.	2 Cloths and 1 cumbly annually. Rs. A. P. Cost.... 1 12 0	Working on the roads—tradesmen work at their trades.	From 7 A. M. till 4 P. M.
CHINGLEPUT.	14 separate apartments, capable of holding 300 prisoners.	300 prisoners, no separate sleeping cells.	Half measure of rice, with sufficient condiments for curry. A. P. Cost.... 4 5	2 Cloths and 1 cumbly annually, no bedding. Rs. A. P. Cost.... 1 8 0	Repairing roads, weaving, and paper making.	From 7 A. M. till 4 P. M.



	Population.	Square Miles.
Salem	9,23,465	8,[illegible]00
Coimbatore	7,77,102	8,280
Travancore	1,300,000	8,000
Tinnevelly	8,30,891	5,700
Madura	6,23,260	10,700
Tanjore	9,72,902	3,900
Trichinopoly	5,65,[illegible]	3,000
	6,01[illegible]	47,780

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Lith. by B.C.Regel.

SOUTHERN DIVISION.

Introductory remarks; situation, extent, boundaries, &c.

This division of the Army is situated between the 8th and 13th degrees of North latitude, and 77° 30″ and 80th degrees of East longitude, being of an irregular shape, extending in its greatest length, from Cape Comorin to the borders of Mysore, and in its extreme breadth, from Negapatam on the eastern, to Cochin in Travancorè, on the western coast, and presents a surface estimated at about 47,780 square miles, with a population amounting to 6,015,596. The general aspect of the country is extremely varied, being traversed by the great western range of mountains, which separate Travancore from the rest of the division; the northern parts are also mountainous. The river Cauvery flows through a great part of the division, irrigating in its course, the extensive plains reaching from Coimbatore to Negapatam.

The division is bounded on the east, west and south by the sea, and on the north by Mysore. It is subdivided into the following districts or collectorates, viz. Salem, Coimbatore, Travancore, Tinnevelly, Madura, Tanjore and Trichinopoly. The principal military stations are situated in Coimbatore, Travancore, Tinnevelly, Madura and Trichinopoly, the latter station being the Head Quarters of this division of the Army.

SALEM.

Situation and boundaries.

This Collectorate which is adjoining the southern division of Arcot, lies between 11° and 13° N. latitude, and 78° 20″ and 74° E. longitude, being bounded on the east by the Arcot collectorate, and on the west by the collectorate of Coimbatore, on the south by Trichinopoly, and on the north by Mysore. In length, from north

to south, it is about 120 miles, and in breadth it averages nearly sixty miles, presenting a surface estimated at 8,200 square miles, and having a population of 923,465 souls.

Extent and population.

From the different elevations of the various parts of the collectorate, the climate and appearance of the country vary considerably, for besides many detached hills, there are several ranges of mountainous high land in the district, which rise to the height of between five and six thousand feet above the level of the sea. The Juvenaddy mountains are situated on the eastern side of the Baramahl, the Sheevaroy, near the town of Salem, the Patchamally; in the talook of Ahtoor, and the Collemally, and Shendamungalum range, in the south eastern corner of the district. All these hills are inhabited and extensively cultivated, and produce abundance of teak, sandal wood, and * black wood. The climate is found to be cold and bracing, and for a great part of the year very salubrious.

Mountains.

Tanks & rivers. There are no natural lakes in the district, but there are many tanks, some of which are of considerable extent, and besides the Cauvery river, which runs along the western and southern boundaries, the Palaur flows through the northern part of the collectorate.

The Zillah is subdivided into 14 talooks; the names of which, and some useful information appertaining to each, will be found in the appendix.

Manufacture. Cloth is the staple manufacture, and was formerly exported in large quantities to America and the West Indies. Iron ore of a very rich and peculiarly fine quality abounds, and both iron and steel are manufactured to a considerable extent; a crystalized oxide occurs in great abundance, and is one of the richest ores of iron known; its specific gravity averages 5·136.

* *Dalbergia latifolia.* Roxb; frequently, though incorrectly, called *rose wood.*

Situation, elevation &c. The town of Salem, which is the chief station and capital of the collectorate, is situated in north latitude 11° 39′, and east longitude 78° 12′, at an elevation of 1,070 feet above the level of the sea. It lies in the lowest and narrowest part of a valley, about seven miles in width, formed by the Sheevaroy hills to the northward, and a smaller and undistinguished range, to the southward. This valley is prolonged about five miles from Salem in an easterly direction, when, by the termination of the smaller hills, the country again becomes open. Westward the country is generally open, the only exceptions being occasional small insulated hills.

Salem is about 100 miles in a direct line from the sea, and lies nearly due west of Cuddalore, to which there is a good road of communication. From Madras, in a south-westerly direction, it is distant about 220 miles. It has two Roads. direct lines of communication with the Presidency, one by Vellore, the other by way of Chingleput, and Tragar; a third might be named, that by way of Cuddalore, which however is nearly the same as that just mentioned by Vellore; these roads are generally in good repair.

In addition to these already mentioned a road to Bangalore falls into that from Madras, viâ Vellore, at Admoncottah, 40 miles from Salem. This road is in excellent repair throughout.

A road also runs from Salem in a south easterly direction, to Trichinopoly, and another south westwardly to the western coast, and the Neilgherries, which is in very good repair, for 40 miles, through the Salem district.

Rivers tanks &c. This district does not possess the advantage of any navigable river, one however known under the name of the Tyromany, having its main source in the Sheevaroy hills, flows by, and forms the boundary of the town of Salem on the north and west sides; on the western side the entrance

to the town is over a substantial bridge of three arches. It is only in the vicinity of Salem that this stream approaches to the magnitude of a river, its increase of size at this point being occasioned by the erection of three dams, one near the entrance to the town; a second at the distance of about nine furlongs, at the point where the river ceases to form the western boundary,—and where from the right angle it takes, it would seem its course had been in some degree diverted, for the defence of the old dismantled mud fort, two sides of which are washed by the river;—and the third at a distance of 9 or 10 furlongs lower down the stream. From its elevated source, and the circumstance, that the overflowings of one or more large tanks discharge themselves into the river, it becomes much increased, and occasionally rises above its banks during the rains, particularly in the vicinity of the dams; the town is well raised above the banks of the river, the bed of which is either stony or sandy, and the waters run off quickly leaving no alluvial deposit.

The face of the surrounding country is studded with tanks. It has been said, that during the rainy season, from the brow of the Sheevaroy hills, not less than 200 tanks, or ponds of various sizes, can be seen; there are within a circumference of five miles eighteen of these tanks, varying from a furlong or two, to a mile and half in diameter; besides these and the dams across the river, there are likewise three other dams by which the waters of some smaller streams are pent up for the purpose of irrigation; but they all become dry between the months of December, and March or April.

In a regular season the tanks are filled by the rains of the S. W. monsoon, between June and the end of August, and if much rain falls in September, the low grounds particularly between Salem and the Sheevaroy hills, become in many places swampy; this superabundant water however usually disappears during the dry month of October; of late years the N. E. monsoon, which begins about the end of

October, has not extended to this district sufficiently to reproduce these marshes.

Besides the Tyromany river which is never entirely dry, there are 2,400 wells, and thirty large bowries, in and around Salem. As might be expected from the inequality of the ground on which the town stands, water is found at very unequal depths, varying from six to thirty feet from the surface. With few exceptions, the water of these wells and reservoirs is more or less brackish, nevertheless it is very generally drank by the natives; the river water being chiefly used for ablution and culinary purposes. The natives do not consider its being brackish injurious to themselves, though they think it prejudicial to strangers. It so happens from the nature of the localities, that it is most convenient for strangers, whether Europeans or natives, to use the river water.

Sheevaroy hills. Mention has been made of the Sheevaroy hills as forming one boundary of the Salem valley, they approach to within five miles of the town, and extend in a northerly direction towards the flat land of the Baramahl; their greatest altitude is generally computed at 4,190 feet above Salem, and 5,260 above the level of the sea, but the general height of the table land does not exceed 4,600 feet;—a few small streams only are found on these hills, some of which become dried up, between the cessation of the N. E. monsoon, and the return of that from the opposite quarter; these hills are but scantily clothed with vegetation.

On their sides, for about the first third of the ascent, the common shrubs and trees of the plain are met with, the middle third is almost wholly clothed with bamboo, whilst on the upper third and summit, a short thick, coarse herbage, long rank grass with ferns, and a thick stubborn shrub peculiar to the hills are found; large wide spreading trees, among which the bastard cedar preponderates, border the streams.

Two passes lead up the hills, one on the southern side towards Salem, and one on the northern; the former about five miles in length, was once a good road, but is now hardly passable on horseback; the northern pass has never been more than a foot track.

Climate.

With regard to climate, Salem has long been considered insalubrious, owing to the great daily vicissitudes of temperature during a considerable part of the year; the thermometer having been found to range in December from 60° to 87°—in January from 58° to 82°, in February from 60° to 91°, and in March from 66° to 95°; in the two succeeding months, the variation is less, being in April from 72 to 95, and in May from 75° to 96°; early in June the monsoon from the western coast, commonly extends to Salem, in short but heavy and frequent showers, attended with thunder and lightning, continuing till late in September; by the end of October rain begins to fall from the N. E. monsoon, and showers recur, with a very clouded sky, till the middle of December. Between June and December, the climate of Salem, though often sultry and oppressive, may be considered cool, the extremes of the thermometer being 68½° and 90°.

Prevailing winds.

A north-easterly wind prevails pretty steadily at Salem from the beginning of November, to the end of January, or middle of February, which is for the two first months after it sets in, rather moist, cool and agreeable, but becomes more and more arid as the season advances, blowing from the mountains which bound Salem on the north; this wind becomes in January disagreeably cold and parching in the morning, and unpleasantly dry and warm at noon. It produces even in persons in health a disagreeable dryness of the skin, and exposure to it seems a frequent exciting cause of fever.

After the middle or end of February, the wind which is at

times variable, with frequent lulls, shifts round to the south and south-west, and blows from that quarter in hot puffs, and with much uncertainty, during April and May; cooled by the rains of the S. W. monsoon, this wind blows pretty fresh in June and July, and more moderately in the two following months. In October the wind again becomes variable, till the setting in of the N. E. monsoon.

Soil and mineral produce. The soil of the country immediately surrounding Salem varies much, a thin layer of calcarious and red loam generally prevailing, through which quartz rocks appear on the surface in many places; native carbonate of magnesia or magnesite is found in a stony barren plain, about five miles to the N. W. of Salem, in veins running generally in a vertical direction through horneblende rock, of which all the hills about Salem are formed; associated with this magnesian formation, chromate of iron is found, and also extensive thick veins of quartz. The chief value of this carbonate of magnesia, is from its forming a very excellent cement but it has also been used in the preparation of sulphate of magnesia, and of the pure magnesia. A small quantity was sent to Europe, some years ago as a commercial speculation, which however failed entirely. With these exceptions no other peculiar mineral products are found in the vicinity of Salem, though in the southern part of the district, iron ore exists in considerable quantity, yielding on fusion, about 60 per cent of metal.

Vegetable productions. The immediate vicinity of Salem, is, as might be expected from the number of tanks, highly cultivated; of the arable land the proportion of wet cultivation to dry, is estimated 1½ to 3½; cotton more than sufficient for the employment of the weavers of Salem, is grown in the neighbourhood; Oopum cotton, a perennial plant is indigenous to the country. The Bourbon cotton has also been introduced into the district, and is greatly on the increase, from the congeniality of the calcarious soil of Salem to its growth.

The American sea island, vine leaf and nankeen cotton have also been introduced, and with every promise of success. Indigo, and the common tobacco of the country are cultivated; the former being manufactured to some extent; and all the ordinary grains are produced. In average seasons even from dry cultivation, two and even three crops are reaped, and grain is therefore generally cheap.

Coffee. The cultivation of coffee has been introduced into this and other districts of southern India, within the last three or four years, and promises to become an article of export, being grown to a considerable extent on the Sheevaroy and other ranges of hills.

Population. The population of Salem and of the suburbs adjoining, is estimated at 19,021 souls, occupying 3,821 houses, giving an average of nearly 5 inmates to each; the town covers an area of 265 square acres. Two wide principal streets run from east to west, through the town, the other parts of which consist merely of narrow lanes. The direction of the two large streets is favorable to the perflation of air throughout the year, but the lanes are close and confined. The population of Salem consists of adult males, 5,801, or about 30½ per cent, adult females, 6,571, or 34½ per cent; male children, under 15 years, 3,636, or 19 1-9th per cent; female children 2,983, or 15 2-3d per cent; and considered with reference to occupation they may be classed into tradesmen, the great proportion of whom are weavers of silk and cotton, and agricultural labourers;* the weavers are considered more healthy than those whose occupations expose them to the sun and wind. The census taken in 1835 shews an increase of 87½ per cent, of the population since 1801, which increase is mainly attributable to immigration. The circumstances which lead to this conclusion, are the location here of the Company's commercial and other establishments, which must have attracted many weavers, and other settlers; the number of houses have only increased 13½ per cent, in the same period.

* These calculations are the result of a census taken with all possible pains, to attain accuracy, by the collector in 1835.

Salem is not remarkable for the longevity of its inhabitants, but births are thought to bear a high ratio to the population. No documents or data however exist, on which can be founded even a rude guess, at the annual number or proportion of deaths, births and marriages. The town may be considered on the whole clean, favoring which two circumstances concur, viz. a great demand for manure of every description, and the general declivity towards the river.

The dwellings of the poorest class are the common thatched mud huts of the country, but little raised from the ground; the houses of the middle and better classes, are frequently of brick, a mode of building which has of late been on the increase, and even when the walls are of mud, the roofs are now generally tiled, and the floors somewhat raised from the ground. Cotton cloths being manufactured at this place, a very small proportion of the inhabitants are without clothing; they also sleep on cotton carpets, or on mats spread on the ground.

The diet of the chief mass of the population is the inferior descriptions of grain, such as raggee, cholum, &c., and it is estimated that from $\frac{1}{4}$, to $\frac{1}{5}$ of the people eat meat daily; other classes as ryots, seldom obtain animal food, except on holidays. It is not supposed that the protracted use of any particular grain is injurious, but on the contrary changes of diet are deprecated by the natives, as prejudicial to health.

Prevailing diseases; Intermittent Fever.

Intermittent fever is endemic, and is present more or less throughout the year; it is usually most prevalent in the first quarter, a period during which, as already noted, easterly winds prevail, the mornings being cold and raw, and the days dry and scorching, attended with great vicissitudes of temperature. It is to be observed also, that this season corresponds with the time when the numerous tanks, and extensive rice grounds in the vicinity, have become, or are nearly dried up; a condition of the soil

generally admitted as most favorable to the developement of of malaria; this remark, and the circumstance of the town being situated " in a valley," will explain not only the prevalence, but the endemic nature of febrile diseases. Few if any natives, strangers to the place, escape an attack of fever during the first twelve months; and very frequently they are attacked within a few weeks after their arrival. The ague assumes in natives every variety of type, though more rarely the quartan; the great majority of cases are of the quotidian form.

Europeans are much less subject to intermittent fever than natives, and when not predisposed to the disease by irregularity of the biliary functions, or other causes, have been known to escape fever for several years; but when once the disease is contracted, it very rarely perhaps never fails to recur from time to time, at least during the more feverish season; and occasional paroxysms in some instances occur long after removal from the country. As to the type the intermittent assumes in Europeans, experience shows that the quotidian and tertian forms are about equally prevalent.

Attacks of the Salem intermittent, whether in Europeans or natives, are at first generally of a mild character, a slight determination to the head, in the first attack, is usually the only local affection, and it has been observed that the disease yields very readily to quinine;—the natives when the subjects of intermittent fever, and left to their own resources, are commonly content to abide the spontaneous cessation of the paroxysms; all classes however are glad to obtain bark, and more especially quinine when suffering from this disease. Enlargements of the spleen and liver, consequent upon which dropsy general or local supervenes, are not unfrequently the sequel of this fever.

Dysentery and Diarrhœa.

Dysentery and diarrhœa are not unusual among the natives, particularly during the rains; and

disease of the lungs is also frequently met with, during the same season.

Cholera. Cholera for several years prior to 1834, occurred in an epidemic form generally twice in the year, at the commencement of the rains in May or June, and at their final cessation after the N. E. monsoon, but as in intermittent fever, isolated cases are met with throughout the year. It used to be observed that every heavy fall of rain, particularly if unseasonable, was followed by the appearance of this disease. Since 1833, cholera as an epidemic has occasionally occurred, but not so severely or extensively as in former years.

Fort. On the western bank of the river, and rather to the south of the town, stands the old mud fort of Salem, the ramparts of which have been partially thrown down, and the ditch filled up. The houses of the few Europeans resident here are at some distance west of the fort, which is chiefly inhabited by peons.

Jails. Jail No. 1, or the old jail, is situated on the right bank of the river, detached from all other buildings except the hospitals. The site is slightly elevated and sloping; soil thin, red and dry, resting on a rocky base; it is a bomb proof building with an arched roof, having walls of great strength and thickness, composed of burnt brick and chunam, with a partition wall dividing it into two parts lengthwise. It has, besides three small cells, seven apartments of equal size, ventilated by 19 grated windows of moderate dimensions, and is calculated to contain 146 prisoners, allowing 2 feet, by 6 or 7 for each person; but were the number of the prisoners complete, so limited a space would evidently be incompatible with health. The particular dimensions of the wards is exhibited in the annexed sketch. Within the walls are two wells of good water. This jail was first occupied in 1805, and has undergone no material alteration, or repairs

since that period, and has always been allotted for prisoners sentenced to death, or to more than two years confinement.

Jail No. 2, or the new jail, is situated on the left bank of the river in close approximation with the town; its site is low, damp, and confined; the soil is black earth resting on an argillaceo-calcarious base. It is built in the form of an oblong square with a tiled pent roof; the walls are thin, composed of sun burnt brick and mud, pointed with chunam. It contains 13 apartments, and 2 store rooms of different dimensions, which are ventilated by 53 good sized grated windows, and the building is calculated for the accommodation of 318 prisoners, allowing, as in the old jail, a space of 2 feet, by 6 or 7, for each prisoner, which is of course liable to objection as above stated. The annexed sketch shews the distribution of the cells, and other particulars. It formerly consisted of a number of small godowns converted to the present use in December 1821, and was first occupied in January 1822; the windows were enlarged and increased in number, and the floors raised a few inches by bricks being laid down edgewise in 1823, but it still continues damp. It is allotted for prisoners under trial, and for such as are sentenced to 2 years confinement, and under. There is a well of brackish water in the centre of the yard.

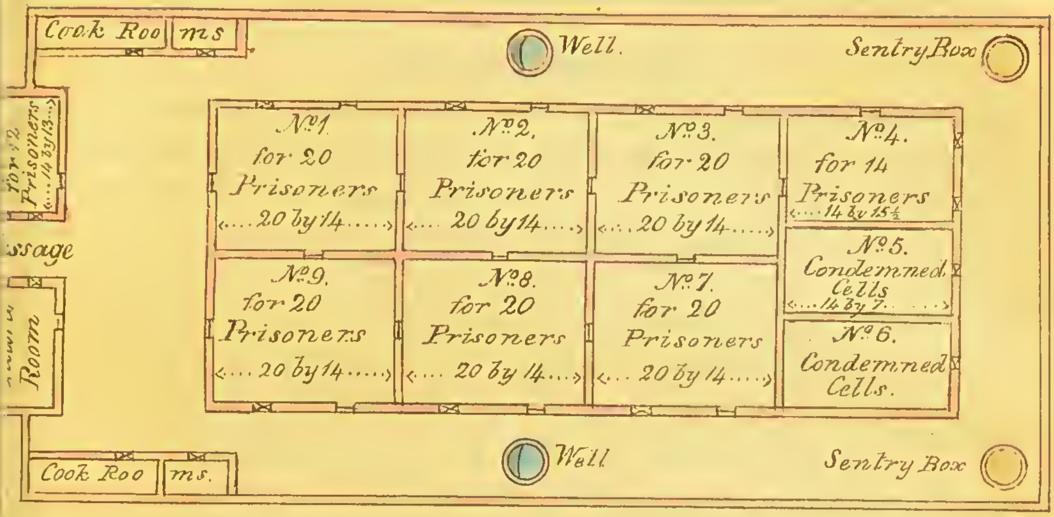
Adjoining the old jail is the hospital, a room 35 feet by 14, having the requisite out houses, but it is much too small for such a sickly jail. The military hospital also adjoining, is but a mere shed; from the little sickness in the detachment doing duty here, it however answers the purpose sufficiently well.

The civil jail within the fort, has generally very few tenants; it is a quadrangular building after the common fashion of the better description of native houses.

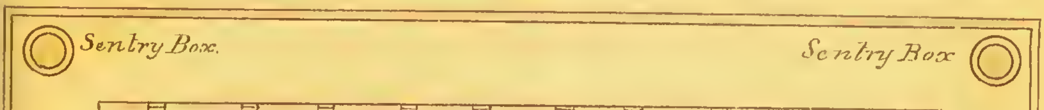
The following tables shew the nature and amount of disease and mortality which have occurred amongst the inmates of the jails, during a period of ten years, from 1829 to 1838

PLAN of the JAILS at SALEM.

No. 1.



No. 2.



hographed by B. C. Regel.

Madras Lithographic Press

inclusive; they exhibit the diseases classified, and point out the per centage of sick to strength, and of deaths to the number of sick treated.

JAIL OF SALEM.

No. 1.—*Table exhibiting the Number of Admissions and Deaths, of the Convicted Prisoners, from each Class of disease, for ten years.*

CLASSES.	DISEASES.	From 1829 to 1838. Aggregate strength 2,393. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions & deaths from each class of Disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each Class.	Total Deaths from each Class.	Average percentage of sick to strength.	Average percentage of deaths to sick.
Fevers......	Febris ephemera	17	0	33	2	253	34	216	25	469	59	19 ·598	12 ·579
	,, intermit quot.	220	28	173	22								
	,, tertian.......	9	1	9	0								
	,, remitt.......	6	4	0	0								
	,, continua.....	1	1	1	1								
	Cholera	215	99	110	61	215	99	110	61	325	160	13 ·581	49 ·230
Diseases of the Abdominal viscera......	Diarrhœa.... ..	148	22	154	28	236	46	314	95	550	141	22 ·983	25 ·636
	Dysenteria acuta et chronica.	88	24	160	67								
	Hepatitis acuta et chronica. ..	0	0	1	1	0	0	1	1	1	1	0 ·041	100 ·0
Diseases of the Lungs.	Catarrhus	5	0	4	1	14	6	11	3	25	9	1 ·044	36 ·0
	Asthma........	4	3	1	1								
	Phthisis pulmonalis.........	1	1	1	1								
	Pneumonia......	2	0	3	0								
	Dyspnœa.......	2	2	2	0								
Diseases of the Brain.	Apoplexia......	5	5	4	4	14	5	11	7	25	12	1 ·044	45 ·0
	Epilepsia.......	4	0	3	0								
	Paralysis.......	1	0	3	3								
	Mania..........	4	0	1	0								
Eruptive Fevers......	Variola	14	4	2	0	33	4	26	0	59	4	2 ·465	6 ·779
	Varicella.......	19	0	24	0								
Dropsies....	Anasarca.......	86	33	88	36	87	34	89	36	176	70	7 ·354	39 ·772
	Ascites.........	1	1	1	0								
Rheumatic affections.	Rheumat. acutus et chronicus	74	4	63	0	74	0	63	0	137	4	5 ·725	2 ·919
Venereal affections ..	Syphilis primitiva..........	1	1	1	0	2	1	5	0	7	1	0 ·292	14 ·285
	Gonorrhœa.....	1	0	1	0								
	Hernia humoralis...........	0	0	2	0								
	Strictura urethrae.........	0	0	1	0								
Specific diseases.....	Atrophia.	1	0	0	0	103	0	52	3	155	3	6 ·477	1 ·935
	Dracunculus....	101	0	50	1								
	Ulcus phagedenicum........	0	0	2	2								
	Scorbutus......	1	0	0	0								
Diseases of the Eye,.	Morbi Oculorum...........	21	0	22	1	21	0	22	1	43	1	1 ·796	2 ·325
Diseases of the skin.	Morbi cutis.....	64	0	74	0	64	0	74	0	138	0	5 ·766	0 ·0
	Other diseases..	857	4	806	14	857	4	806	14	1663	18	69 ·491	1 ·082
	Total......	1973	237	1800	246	1973	237	1800	246	3773	483	157 ·668	12 ·801

JAIL OF SALEM.

No. 2.—*Table exhibiting the number of Admissions and Deaths, of the Prisoners under Trial, from each Class of disease, for 10 years.*

CLASSES.	DISEASES.	From 1829 to 1838. Aggregate strength 161. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions and Deaths from each Class of Disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total Deaths from each class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
Fevers......	Febris ephemera	2	0	0	0	6	1	1	1	7	2	4 ·347	28 ·571
	,, intermitt quotid	4	1	1	1								
	Cholera..........	22	15	4	3	22	15	4	3	26	18	16 ·149	69 ·230
Diseases of the Abdominal viscera... ...	Diarrhœa.......	2	0	3	0	5	1	4	0	9	1	5 ·590	11 ·111
	Dysenteria acuta et chronica	3	1	1	0								
Do. brain..	Mania.........	2	0	1	0	2	0	1	0	3	0	1 ·863	0 ·0
Eruptive fever........	Varicella	1	0	0	0	1	0	0	0	1	0	0 ·621	0 ·0
Dropsy.....	Anasarca.......	2	0	0	0	2	0	0	0	2	0	1 ·242	0 ·0
Specific diseases....	Dracunculus	1	0	0	0	2	0	1	1	3	1	1 ·863	33 ·333
	Ulcus phageden	1	0	1	1								
Do. skin..	Morbi Cutis....	0	0	1	0	0	0	1	0	1	0	0 ·621	0 ·0
	Other diseases..	2	0	2	0	2	0	2	0	4	0	2 ·484	0 ·0
	Total.	42	17	14	5	42	17	14	5	56	22	34 ·782	39 ·285

Remarks on the preceding tables of disease.

The average annual numerical strength has been 239, and the admissions into hospital 377, or 157 per cent, on the strength. In 1833 and 1834, years of famine, this average was considerably increased; the strength in 1833 amounted to 498, and in 1834 the number of prisoners was 412; in these two years also, 1372 admissions took place, more than a 3d part of all the sick during the ten years, with 228 deaths, nearly one half of all the mortality; the total admissions being 3773, and the total deaths 483.

The principal diseases both as to number, and the mortality caused by them, have been *fevers* of various types,

(but chiefly *quotidian intermittent*), *cholera, diarrhœa, dysentery* and *anasarca*. A concise table, shewing the admissions and deaths from these diseases, each year, is appended.

Table No. 3.

	1829		1830		1831		1832		1833		1834		1835		1836		1837		1838		Total	
	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.
Fevers...............	29	4	16	0	15	2	26	3	83	17	60	12	37	3	86	3	65	5	52	10	463	59
Cholera..............	119	50	39	22	3	2	29	13	81	43	0	1	0	0	0	0	43	24	11	5	325	160
Diarrhœa............	15	0	40	4	31	3	37	1	47	13	25	15	20	4	32	5	29	3	26	2	302	50
Dysentery...........	9	6	6	3	4	1	4	1	71	31	55	35	15	5	5	0	47	5	32	4	248	91
Anasarca...........	20	13	24	14	6	3	3	0	41	16	41	17	8	0	6	2	15	1	12	4	176	70
																				Total..	1520	430

Thus it will be seen from the five diseases alone, that 430 deaths have occurred, or nearly 8-9ths of the whole mortality.

It is not easy to explain satisfactorily, the much more extensive prevalence of these diseases, and the usually greater amount of mortality, amongst the inmates of this jail, above that which will be seen to occur in the other prisons in the division. It is well known however, that the inhabitants of the Salem district suffer periodically from febrile disease, which has been supposed by the Superintending surgeon to cause visceral derangements and dropsies, and thus to render them more susceptible of being attacked by epidemic visitations. It has also been observed that natives unaccustomed to change of climate are particularly liable to sickness when removed from their villages, and taking into consideration the great extent of the Salem district and of the Baramahl, and the varieties of climate they embrace, compared with the other collectorates in the division, it is highly probable that change of climate, abode, food, &c., exert a great influence on the health of the prisoners; and in striking contrast with the mortality in the Salem jail, is that of the detachment of native soldiers stationed here, usually about 260 in number, amongst whom the average annual mortality has not been above 2½ per cent on the strength, while that in the jail, during the same period, from 1829 to 1838, averaged 20·183 per cent.

The site of the jails may also exert some injurious influence on the inmates, particularly that of No. 2; which is low, and the floors damp, notwithstanding their having been raised a second time in 1830; this may occasion bowel complaints, and induce a state of system favorable to dropsical effusion; but doubtless the principal cause of the great sickness and mortality, is the peculiar nature of the climate, and liability to epidemic visitations, above noticed.

During the three years from 1826 to 1828, both inclusive, the total annual mortality was $17\frac{1}{2}$ per cent, the proportion from particular diseases being as follows, viz., from cholera $7\frac{3}{4}$, from bowel complaints $2\frac{2}{5}$, from dropsy 4, from fever $1\frac{1}{5}$, from other diseases, (of which those of the pulmonary viscera were about one half,) 2 per cent. The average of deaths to cases treated, during the same period, was as follows, cholera $46\frac{1}{2}$ per cent, bowel complaints $21\frac{1}{4}$, dropsy $65\frac{2}{5}$ and fever $7\frac{2}{5}$.

Fever. With regard to *fever*, in addition to the previous remarks, it is only necessary further to add, that in the intermittent form of the disease, the first attack was seldom or never fatal, and that most of those deaths recorded in the table, were the result of frequent and protracted relapses, complicated with visceral disease.

Cholera. The mortality from *cholera* has been nearly 50 per cent, on the cases treated from 1829 to 1838; in every visitation of this disease amongst the prisoners, it has shown itself in the low asphyxial form, and it has been observed to be usually more fatal amongst them, than amongst the inhabitants generally.

Dysentery and Diarrhœa. *Dysentery* and *diarrhœa* of a peculiarly severe and intractable form, are always present in this jail, and have produced a great proportion of the mortality; in some years, as 1833, 34 and 37, both diseases from their frequency may be said to have been epidemic. The character of the dys-

entery especially in such seasons, may be called "passive"; no pain of abdomen being present, and it being unattended with febrile symptoms; the watery, grumous bloody stools were passed with little griping and no tenesmus, and changed to a pale watery and equally offensive fluid, after three or four days, in many cases resisting all attempts to check it; in this state as well also as in cases of diarrhœa, the sulphate of copper combined with opium, was the only remedy which produced any good effect.

The post mortem appearances in these diseases are not recorded.

Dropsy and Beriberi.

In connection with *dropsical disease* it may be mentioned, that previous to 1829, *Beriberi* prevailed in some seasons in the jail, the numbers affected were small, but the mortality was very great in proportion. The dropsical rather than the paralytic symptoms predominated. Since that time only one case, and that scarcely marked by paralysis, has happened amongst the prisoners, although the disease attacked the sepoys stationed here, in 1832 and also in 1833, as will be seen by the following extracts from the medical officer's report.

"The first quarter of the year 1832 was marked by the sudden out-break of a severe form of *Beriberi* with paralysis amongst the sepoys. It was very fatal, of seven men so attacked, six died, two of these within a few hours after admission."

"During the same quarter of the ensuing year, a similar disease prevailed; but on this occasion the œdema of beriberi was present as well as the paralysis; eight cases occurred, one recovered, three died in hospital, and the other four were transferred immediately after admission to Dindigul, to the Head Quarters of the regiment, and all recovered."

"Nothing satisfactory could be elicited as to the cause of

"this outbreak of beriberi. The dry disagreeable north east wind peculiar to the season of the year was remarked to be unusually high, particularly at night, but in no case could any direct connection be traced between the attack and exposure to this wind; that it had some influence in producing this disease however seems probable, from the fact, that among the large body of prisoners who were safely excluded from the night wind, but one ease of the disease appeared."

During the last four years of the period embraced by these remarks, it will be observed (see table No. 3,) that dropsy was not only less frequent, but also less fatal than formerly; and, as will be seen from the following extraet from a report dated 1837, the character of the disease appears to have changed considerably.

"Formerly the dropsy so common in the Salem jail, was purely a cachectic disease, and treated accordingly; on the contrary it now exhibits rather an inflammatory character, and in the treatment venesection is sometimes requisite, and jalap and supertartrate of potash are extensively used, particularly the latter, and with much advantage."

Dyspepsia ? In the latter half of the year 1838, a few cases of an anomalous complaint were admitted into the hospital, characterised by the following symptoms; great debility burning sensation in the hands, feet, and in the eye balls, tongue slightly coated, pulse not much affected, bowels not deranged, nor appetite impaired; after a few days a speck of ulceration appeared on the cornea of one or both eyes, with surrounding opacity, diarrhœa supervened and continued for some days, when œdema appeared, and was followed by a fatal termination. The treatment, which proved successful, in slighter cases when the burning sensation was confined to the hands and feet, was first an emetic on admission, with small and repeated doses of the neutral salts and a combination of Dover's powder with nitre, but was of no avail in severe cases. The death under the head *morbi oculorum*, recorded in the table, was a case of this complaint, including

which four deaths were occasioned by it. In these cases change of food was considered the probable cause of the disease.

Ulcers. Amongst the class of other diseases, *ulcers* produced by the friction of the irons on the legs and ankles, form, in this as in all other jails, the greater proportion. They have been treated by the application of the solid lunar caustic, with very satisfactory results; cicatrization being found to be speedy, and the surface less liable to fresh abrasion on resuming the irons, than when healed by other applications.

In conclusion, it may be proper to add a few lines on the Salem hills, considered as a sanatarium.

Sheevaroy Hills as a sanatarium. The Salem or Sheevaroy hills, previous to 1824, were much frequented by invalids, and others to escape the heat of the plains; but in June of that year, a severe and fatal disease broke out on them, assuming in many cases the yellow or remittent form of fever, which caused them to be deserted. As a general rule it may be observed, these hills are free from fever, during the dry months, and it is not till after a fall of rain, that disease prevails to any extent; but from the superior advantages the Neilgherry hills offer to invalids, the value of the Sheevaroy hills as a sanatarium, is not of much importance. The elevation of these hills is not above fever range, although it has been pretty correctly ascertained, that they are healthy during the dry months; they however afford an eligible temporary change of climate, for people residing in the immediate neighbourhood. The same remarks apply to the Shendamungalum, and other ranges of mountainous land, in this collectorate.

COIMBATORE.

Situation boundaries and extent.

The District or collectorate of Coimbatore, situated betwen the parallels of latitude 10° 45,″ and 11° 48″ north, and longitude 76° 50,″ and 78° 10″ east, is divided into fourteen talooks, viz. Coimbatore,. Danaikencottah, Suttimungalum, Colligal, Andioor, Errode, Parindaroy, Cheyoor, Pulladum, Pullachay, Chuckragherry, Dharapoorum, Kongyam and Caroor ; it is bounded on the north, by the territory of Mysore, and the river Cauvery, on the south by the province of Dindigul, and the hills of Travancore, on the east, by the collectorates of Salem and Trichinopoly, and on the west, by the eastern ghauts, the Neilgherry mountains and the Vellingherry and Paulghaut ranges of hills. Its extent from north to south is about one hundred and ten miles, and from east to west about seventy. Its superficial extent may be estimated at about 8,280 geographical square miles, and the average height of the plain above the level of the sea, is about 900 feet. The distance of its western boundary from the Malabar coast, is about seventy miles, and of its eastern, from the coast of Coromandel, about one hundred and thirty.

Although some parts of the district, and particularly those lying to the southward and westward, which are known by the name of the Animally woods, and celebrated as being the haunts of wild elephants, are covered with forest and thick jungle, yet, generally speaking it may be described as a flat open country, ascending gradually from the south and east, to the base of the Neilgherry and Paulghaut ranges of hills, which rise abruptly from the plain, with an elevation, particularly the former, of several thousand feet.

This province, Buchanan states, was in remote times known by the name of Kanjiam, and had been under the

dominion of the Mysore Rajahs for about 120 years before it was acquired by the East India Company, in 1799.

Rivers. The principal rivers watering this district, are the Cauvery, the Bowany, the Noyel and the Amberavatty. The Cauvery has its source near Mercara in Coorg, and after passing the eastern ghauts, runs along the whole eastern frontier of the district, and affords for nearly the whole year, an abundant supply of water for the purposes of cultivation, in the neighbourhood of its banks. The alluvium which this river deposits is of a peculiar character, and has been described in the account of British India, by Professor Jameson and Dr. Ainslie, as follows. "This river (the Cauvery) "flowing in a long course through the Mysore country, over "an extensive and generally barren surface of granitic rocks, "with scarcely any woods or jungle on its banks, seems to "bring down little or no vegetable matter, but a rich clay, "produced from the felspar, which predominates in the "granites of the south, intermixed with decomposed calcarious "conglomerate, rendering the plains of Tanjore the most "fertile of the south of India."

The Bowany rises among the Koondah mountains, runs along the eastern base of the Neilgherries, and is joined near Poongaur, a village in the Danaikencottah talook, by the Moyar; and these two streams retaining the name of Bowany, continue their course for about thirty miles through the talooks of Danaikencottah, and Suttimungalum, and at last join the Cauvery at the town of Bowany, in the talook of Andioor.

The Noyel rises in the Vellingherry hills to the westward of the town of Coimbatore, passes nearly through the centre of the district, and joins the Cauvery near the village of Nercooppum, in the talook of Kongyam. The Amberavatty has its source in the Animally or Delly mountains, and after passing through the southern part of the district, it also, at

the village of Trimacoodul, in the talook of Caroor, discharges its waters into the Cauvery.

Besides these, there are numerous other jungle streams, and hill water courses, having their sources generally amongst the western mountains, running in an eastern direction, and all joining either the Cauvery or its tributaries.

Lakes tanks and wells.

The lakes or tanks are 504 in number, some of them of considerable size, situated chiefly in the neighbourhood of the villages. Wells are also very numerous, the number registered, from which revenue is derived, being 38,429, their average depth is 25 feet, the water from them is generally speaking, exceedingly brackish, but is much used for the purpose of irrigation; and on lands thus irrigated the best tabacco produced in this district is raised, the saline properties of the water being considered favourable for the cultivation of the plant.

Morasses.

There are several extensive morasses in the district, situated near the base of the high hills to the southward and westward, and many of the villages in their neighbourhood, particularly those in the Chuckragherry talook, are proverbially unhealthy.

Canals or water courses.

Canals or water courses, are numerous, proceeding from the different rivers as follows, from the river Cauvery 5, two in the talook of Colligal, and three in that of Caroor. From the river Noyel 25, seven in the talook of Coimbatore, eleven in Pulladum, four in Cheyoor, two in Kongyam, and one in Perindoray. From the river Bowany 4, two in the talook of Suttimungalum, one in Errode, and one in Danaikencottah. From the river Amberavatty 22, seven in the talook of Chuckragherry, five in Dharapooram, one in Kongyam and nine in Caroor. These channels are used solely for the purposes of irrigation, and their great importance to cultivation, will be evident from the fact, that the annual amount of the

revenues of villages, which were formerly watered by the periodical rains, and are now irrigated by canals, has increased from Rupees 9,641, to 51,169.

Mountains and Hills. The principal mountains are a part of the Neilgherry range near Kotagherry, rising to the height of 5,600 feet from the plain, running from west to east, and forming the southern side of the triangular plateau of the Neilgherries. Next to these is the Animally range, in the southern part of the district; Captain Ward found some of their peaks as high as that of Dodapetta, on the Neilgherries, which rises to 8,790 feet; several smaller ranges known generally as the Vellingherry and Paulghaut hills, which form the western boundary of the district, connect these two ranges together, with the exception of the opening through them, called the Paulghaut pass, and their average height may be estimated at from 1500, to 2000 feet. In the northern part of the province is a range of primitive trap hills, called the Cauvery chain, forming the southern part of the eastern ghauts, extending eastward from the Neilgherries, their height being in many places 4000 feet. These mountains exhibit throughout, the bold and rugged outline of the primitive formation, and, so far as they have been examined have been found to consist of small grained sienitic granite, and primitive green stone, or horn-blende rock. The general direction of the higher ranges, viz. the southern side of the triangle of the Neilgherries, and the Animally or Delly range, is nearly from west to east, whilst that of the smaller ranges is from north to south, or the same as that of the ghauts. They all however give off spurs and branches, which run in every direction, occasionally forming confused clustered masses, which have in many parts from the plains, an exceedingly picturesque appearance; the sides of the hills are covered with jungle, which also forms a belt round their bases, in many places from 5 to 10 miles broad. They are intersected by many valleys, and are completely separated at Paulghaut by a pass 20 miles in breadth. The very considerable influence which this opening exerts, over the winds and climate of the district, will be hereafter described

under the head of Climate.* The difference of temperature between the plain and the higher surrounding elevations, taking the annual mean of each, may be stated to be about twenty-two degrees.

Climate. The climate of Coimbatore having been so fully described by Dr. Ainslie, Mr. Smith, and Dr. Christie in their medical report on the *Epidemic fever* which prevailed in this, and the adjoining districts, in the years 1809, 1810 and 1811, extracts from their report are here given. "Coimbatore as might naturally be expected from its elevation is "colder and drier than some of the neighbouring countries: "we have already remarked that the general plain of it is "about 900 feet above the level of the sea; so that if the "theory of Dr. Black be just, that for every two hundred "feet of elevation we may reckon one degree of reduced "temperature, the district in question ought to have a great "advantage in this respect, over all those that lie lower and "nearer the ocean."

"The N. E. monsoon commonly commences soon after the "calms are over, which takes place about the period when "the sun crosses the equator, and enters on his southern "declination (in other words, about the middle of October,) "and first pours its torrents over the Coromandel coast, in "the vicinity of Madras, about the beginning of November."

"In Coimbatore the rains at this season, swell the rivers "Noyel, Bowany and Amberavatty, as also the Cauvery; and "at this period, too, the tanks and low grounds of the dis-"trict receive their great annual supply of water."

"The end of December when the N. E. monsoon rains are "over, and the sun has gained his most southern declination, "may be considered as the coldest season of the year, in all "those countries situated north of the equator. In Coimba-"tore, at this period, the range of the thermometer, in the "shade, is from 62° to 80°, or 82°, the climate is then de-

* See also report on the Paulghautcherry District.

" lightful; and the N. E. wind proves enlivening and bracing
" to weakly constitutions. Towards the end of January, and
" in February, the dews fall heavily, and the fogs in the
" morning, especially in situations near the mountains con-
" tinue sometimes till 9 o'clock in the forenoon, occasioning
" simple intermittent fevers, and catarrhs amongst the na-
" tive inhabitants."

"The N. E. wind prevails with little variation till the end
" of March; though it generally becomes weaker the further
" the season advances. After this period as the sun ap-
" proaches the vernal equinox, the winds are somewhat vari-
" able; and occasional calms ensue till he has gained about
" the seventh degree of northern declination, when what is
" called the S. W. monsoon may be said to commence."

" From the time the sun passes the seventh degree, in his
" northern declination, the southerly and S. E. winds begin
" to prevail on the Coromandel coast, and continue till about
" the middle of May: in Coimbatore, and in other inland
" tracts they are weaker and less unpleasant than at places
" closer to the sea, where, particularly near the period of
" their cessation, they are often warm, and to some constitu-
" tions extremely enervating. In the month of March, at
" Coimbatore, rain is very uncommon; the wind, though in
" the morning it still blows gently from the N. E., comes
" usually round to the S. E. in the evening; and towards the
" end of the month the N. E. wind, for the most part dies
" away altogether, and with it, in regular seasons, those
" dews in a great measure disappear, which had fallen hea-
" vily during the two preceding months."

" The sky in Coimbatore in the month of April, is fre-
" quently overcast, but rain is not very common; at least
" not to a greater extent than a few showers from the S. and
" S. W. The weather gets daily hotter, the average range
" of the thermometer for the month being 76°, to 93°. The
" wind continues to blow from the same direction as in the

" end of March but oppressive lulls are often experienced. " In May, the thermometer rises sometimes as high as 96°, " and 98° in the shade, and seldom falls lower than 79°, the " sky is often over cast, and there are frequent disagreeable " whirlwinds, which are quickly followed by pelting show- " ers, accompanied by thunder and lightning."

" The southerly, or what is called the " *Along shore wind,*" " generally terminates about the middle of May; when owing " to this part of the peninsula having been so powerfully " heated by the vertical rays of the sun (the sun is vertical " over Coimbatore about the 18th April,) a change takes " place in the direction of the wind; which becomes general " nearly all over India, and which brings on, before the " rains begin to fall in June, by far the hottest season of the " year."

" We have observed that the sun crosses the equator about " the 21st of March, at which period he commences his " northern declination, and that soon after, the wind begins " to blow from the south; so that by the end of May he has " been vertical over all those districts lying betwixt the " southern extremity of the peninsula and Coimbatore, and " which have of course been much heated: the consequence " of this is, that the air which takes its direction from the " now comparatively cooler regions on the eastern, and " southern coasts of Africa, rushes towards the tracts where " the greatest rarefaction has taken place, and which, as we " have seen must, at this time, be the arid plains of the Car- " natic." " But this wind passing over a great extent of " heated country, will naturally partake of its temperature; " and in this way is produced the hot west wind, which con- " tinues to blow pretty regularly towards the end of August, " when frequent calms and light breezes from different quar- " ters ensue, the evident consequences of the sun's again " approaching the equator."

" Soon after the setting in of the hot westerly wind on the

" coast of Coromandel, the rainy influence of the S. W. mon-
" soon is first experienced on the other side of the peninsula,
" pouring its flood over Malabar and the Mysore country,
" and amongst the immense Balaghaut and western moun-
" tains, but it is but partially felt in the provinces lying east
" of these high lands. In situations near the hills, indeed,
" there are at this time frequent heavy showers."

" After the torrents which distinguish this monsoon, have
" begun to fall in Malabar, the heat of the west wind on the
" Coromandel coast is usually a little moderated, but in the
" Carnatic by no means to that degree that we might expect,
" there its temperature may be nearly calculated by the dis-
" tance from the great western ghauts; as, the farther east
" we go, the greater becomes the heat of the air, the natural
" consequence of the wind having blown over a greater tract
" of arid land."

" After what we have said it can easily be supposed that
" the west wind in Coimbatore, in May, June, July and
" August, is by no means so distressingly hot as in situations
" lying farther east, but it is at least in some parts, fully as
" unpleasant from another cause—its immoderate strength.
" In speaking of the general appearance of this district, we
" mentioned the Paulgautcherry pass into the Travancore
" country, which is in a direct line with Dharapooram and
" Trichinopoly: this opening is of considerable width, and
" being shaped like a funnel, with its narrowest end towards
" the east allows a free and full passage to the west wind,
" from the time that it begins to prevail: for the first fort-
" night this is comparatively weak and little warm, but from
" the commencement of June, till near the end of August,
" when the rains are falling on the Malabar coast, it becomes
" cooler, particularly near the hills, and sweeps over the
" tracts we have above mentioned, with great violence; so
" much so indeed at Dharapooram, as to prove extremely un-
" pleasant to Europeans, who are, during the time that it

" lasts in a great measure prevented from taking exercise
" in the open air.

" In the other parts of this district, out of the strong current of wind, the climate at this time is much more pleasant; such as at Coimbatore and Bavanie; the first of which stands clear of the pass, the other a great way to the westward, and northward of it."

" Were the great western mountains as near to the ocean, in this province, as they are in Tinnevelly we have no doubt but that the rainy influence of the S. W. monsoon would prove considerable at the opening of the Paulgautcherry pass into the Coimbatore country, but as it is, there are only here experienced frequent scudding showers, which however, have the effect of making the climate perfectly cool and agreeable"

" The west wind so refreshing near the opening of the pass by the time that it reaches the eastern boundary of the Coimbatore country, is somewhat warm; and at Trichinopoly where it blows with great force, it would be almost as hot as at Madras, were it not for the extensive flooded paddy fields lying towards the west of that city, and the swollen river Cauvery over both of which it passes"

" A good deal of rain usually falls in the eastern part of Coimbatore in the month of June; but in the more western tracts near the hills, the quantity at the same period is much more considerable: there are scarcely any dews, the sky is often overcast, and the temperature of the air towards the end of the month is somewhat lower than in the preceding one: the nights are pleasant, and the Cauvery, for the most part, fills about the 12th or 15th, from the S. W. monsoon torrents in the upper countries. In July nearly the same kind of weather prevails as in June; only that in the first mentioned month, there is a little more rain than in the last. The range of the thermometer is commonly from 75° and 91°.

"About the middle of August, in this province, the west "wind becomes much more moderate and there are frequent heavy showers and occasional thunder storms: soon "after this, most oppressive lulls are experienced, and the "evenings and nights become hot and close. Towards the "end of the month the river almost invariably fills, and "gentle airs, now and then, blow from the southward."

"In September the wind is variable, but the westerly still "predominates. That sultry and close weather which constantly in inland situations in India, takes place as the sun "draws near to the equator, is now felt: the evenings are "most unpleasant, and the insects very troublesome. There "are occasional showers from different quarters."

"The weather in October in Coimbatore is, for the most "part, similar to that of the month preceding; and though "rain occasionally falls, the air is often close and sultry: "the winds are light and variable, and the insects continue "troublesome."

"It has already been observed that about the middle of "this month, the N. E. monsoon commences, and that at the "same time its rainy influence is first felt in the northern "tracts of the Coromandel coast; but the rains do not "usually reach Coimbatore sooner than towards the 6th or "8th of November, and are generally over by the end of "December, about which time delightful cool weather "begins, with heavy dews."

Soil. The principal soils in the district are, 1st a rich red soil mixed with sand and a species of hard conglomerate, consisting apparently of small portions of the detritus of the subjacent rock, agglutinated by a clayey paste; 2d a red soil mixed with gravel, the gravel consisting almost entirely of small pieces of quartz and small grained granite, having mixed with it a considerable proportion of sand; 3d a soil composed almost entirely of sand

and gravel; and 4th the black carbonaceous clay, generally known by the name of cotton ground or regur which occurs in very large deposits, forming considerable plains in many parts of the district, like the alluvial clay described by Dr. A. T. Christie, "in many places (it is said to be) perfectly unmixed with any foreign ingredient, in other instances it contains nodules of calcareous tufa," and he adds, "the "black colour of this clay, the carbonate of lime, agates, and zeolites found in it, and its conversion into a black glass by heat, all indicate that it has originated from the disintegration of trap rocks." The red soils, generally speaking, do not long retain their moisture, and vary much in depth, in some places the under lying rock, which is almost invariably granite, is very near the surface, whilst in other situations of great extent, the depth of the soil is from 20 to 25 feet. The black alluvial clay, however, not only long retains moisture, but possesses great power of absorbing it from the atmosphere, and it is on this property, it is supposed, that much of its fertility depends. Its depth varies from about 6, to 20 feet.

Vegetable products.

The vegetable products consist chiefly of dry grains. The proportion which the *Punjeh* or dry cultivation, bears to the *Nunjeh* or wet cultivation, has been stated to be as 97, to 3. The principal dry grains are as follows, Panicum Spicatum; Holcus Spicatus, or cumboo; Holcus Saccharatus, or cholum; Cynosurus Coracanus, or natchenny; Paspalum frumentaceum, or warragoo; Panicum Miliaceum, or samay; Panicum Italicum, fenny, or Italian panicle; Panicum Semiverticillatum, or Codraywalier samay; Phaseolus Mungo, or ulandoo; Phaseolus Radiatus, var, or panny pyre; Dolichos Catiang, or caramumay; Glycine tormentosa, cooloo, or Madras gram; Cicer arietinum, cadalay, or Bengal gram; Oryza Sativa or rice; Triticum Hybernum or wheat; Hordeum distichon, or barley; Cystisus, cajan, or towaray; to these must be added Gossypium herbaceum, or cotton; Nicotiana Tabacum, or tobacco; the

blunt leaved variety of the Cassia Senna (Senna Italica foliis obtusis) which grows wild in the jungles; the true senna of Arabia or what is called the Alexandrine senna (foliis acutis) is not known in the province; Curcuma longa, or turmeric of two kinds, one, the ordinary turmeric of the bazars and the other, a peculiar sort found in the jungles near the Annimally hills; this latter kind is much preferred by the natives in their ablutions, and grows wild in swampy nullahs, but from its strong bitter flavour it is not used as an ingredient in their curries. Opium is prepared on the Neilgherries, in considerable quantity, and is exported, principally to the western coast, to the extent of about 2,000 pounds annually, and it is believed that this amount could be easily doubled.—Sison Ammi, seed of Bishop's weed, or womam; Cuminum Cyminum, or cumin seed; Amomum Cardamomum, or cardamom seed, are also exported in considerable quantities, and sent principally to Trichinopoly. Ricinus communis, or the castor oil plant, is much cultivated, and large quantities of both the seed and oil are exported; the Indigo plant, Indigoffera Anil, is cultivated in most of the talooks; the quantity of Indigo manufactured in 1836, was 23 candies. Santalum album, Lin: Serium Myrtifolium, Roxb: or sandal wood, is exported in considerable quantities; the tree grows in the jungly forests round the base of the hills, and the soil best adapted for the culture of it, is a strong red clay, the ground should be rather elevated, and well stocked with trees, in order that the young plants may not have too much moisture in the monsoon, and not be too much exposed to the sun when young. The sandal tree has no smell, till it reaches the age of 20 years; at 50 it may be cut, when it yields about half a candy of wood; and at the age of 100, when it is supposed to attain its full size, it produces an entire candy or 500 lbs. of wood, the value of which on the spot, is about130 rupees; the same tree yields both the white and the yellow sandal wood, the latter being the inner part, and is of great hardness and fragrance, particularly near the root; the white or exterior part, is less dense, and has but a faint odour; this tree is found to thrive

much better, and to come to maturity more quickly in its native forests, than when transplanted and carefully cultivated. The extensive forests in the neighbourhood of the Animally hills, contain abundance of teak (Tectona Grandis); black wood (Dalbergia Latifolia, Roxb:) and other valuable timber, but unfortunately too remote from water carriage to permit of easy exportation.

Much attention having lately been bestowed on the cultivation of cotton and tobacco, the following notice of the different varieties of both these important products, may not be unacceptable.

Cotton. The species of cotton at present grown in this district are six in number, viz. an indigenous annual cotton, or Oopum Purthee; indigenous triennial, or Nattam Purthee; Bourbon cotton; American cotton; green seed cotton, or Shem-Purthee; and lastly, Shedda Purthee.

1st. The indigenous annual cotton, or oopum purthee, (the term purthee literally means cotton with seed) is the staple article of the district, it is sown with most advantage in the deep black lands, it is however also grown in light soil, but with inferior produce; the ordinary method of cultivating it is as follows. The land is manured by sheep being kept on it till the month of April, and after the first fall of rain in that month, it is ploughed four or five times, the period of sowing being according to the rains either in August, September, or October, and before sowing, the land is again ploughed two or three times; this repeated ploughing answers the purpose of harrowing, and renders the land fit for the seed, which is thrown in "broad cast," like common dry grains, the seed being first steeped in cow-dung and water, or red earth and water, to prevent their adhering together; as soon as the seed is sown, a plough follows to cover it in. The plants make their appearance in 7 or 8 days; and in the end of a month in order to clear them from weeds, a light plough made for the purpose, without iron on the coulter, is run over

the ground which clears it of weeds, and thins the plants. In the second month the weeds are removed by the hand, and by this time the plants are sufficiently strong to be able to resist the influence of the weather, and are left to eome to maturity. This species of eotton is generally mixed with dry grain, as Bengal gram, tennay, or castor oil, the dry grains being generally reaped in the January following; the cotton plants in ordinary seasons, bear in February and March when the first gathering commences, and continues till the end of April; should rain fall in the latter month, the plantation is again eleared from weeds, and in July and August, a second plucking takes plaee, in the proportion of about half the first crop.

The wood of this plant, when it ceases to bear, is used for making tatties and other domestic purposes, and the secd is a valuable article of food for fattening and rearing cattle; in these respects, it has advantages over the Bourbon and American eottons, as the seeds of these plants are stated to be injurious to eattle, from being of too heating a quality.

The method of separating the seed from the wool, is by the small hand mill in common use, the charge for eleaning a maund of 25 *lbs.* being two annas, and one person can clean about half a maund daily; the average price of the seed is one Rupee, for 6 or 8 maunds; when cultivated on the black soil, it yields a greater portion of wool to seed, than when grown on the lighter soils, the first gathering yielding one part of wool, to three of seed, and the sceond one of wool, to three and a half of secd.

2nd. Indigenous triennial, or nattum purthee, this species of eotton thrives best on a soil consisting of light red loam mixed with gravel and sand, and a red stony soil, and on the light soils on which the ordinary dry grains of the country ean be cultivated. Stiff and rich soils, which retain much moisture like the black lands, are unfit for the triennial cot-

ton. The method of preparing the land, and sowing and gathering the produce for the first year, is the same as that already described. In January in the second and third years, the plantation is again ploughed and cleared, and the cotton gathered at the same periods as in the first year. When the plant begins to droop, and the produce to be of inferior quality, it is extirpated before the N. E. monsoon sets in, and the land is generally left fallow for pasture, or cultivated with common punjah. Triennial cotton yields in the proportion of one of wool to three and a half of seed, and is reserved chiefly for home consumption; the mode of separating it from the seed, is the same as that mentioned in describing the annual cotton.

3rd. Bourbon cotton, this species of cotton was introduced in 1819, and is now cultivated in seven talooks; although it grows best in red loam, yet it succeeds well in all light red soils of a middling quality, and of this kind of land, it may be estimated that 20,000 acres at least, are available within the district; all black soils should be avoided. The following directions have been drawn up for the cultivation of the Bourbon cotton in Coimbatore, by a resident cultivator of the plant. "The seed should be sown "in the month of August, and care should be taken to "weed the plants for a couple of months, and secure them "by fences from the intrusion of cattle which are ex-"ceedingly fond of them, watering will be required occasional-"ly should there be no rain; the plants bear in the month of "May in the succeeding year, and do not require to be re-"newed for 2 or 3 years or more; the intervening distance "between them should be six feet, thus a cawny will con-"tain 1,600 plants, which will yield from one to two candies "of cotton; the first year will not be so productive as the "second or the third. The neighbourhood of hills should be "avoided, as the dampness of the atmosphere in their vicini-"ty is injurious to the produce, and deteriorates the quality of "cotton."

This cotton is cultivated chiefly by persons of the Vellaler,

Valloover, and Cummawer castes; the proportion of wool to seed is as one to three.

4th. American cotton. In 1831 two hundred and ninety three pounds of American cotton seed were distributed in this district, but from several causes, viz., want of rain, the seed being supposed to be too old, imperfect knowledge of the most suitable soil, and the repugnance always shewn by the natives to introduce any innovation on their old customs, it almost entirely failed, and can* now scarcely be said to exist in the district. When sown in the common black soil, the plant did not bear well; but spread into excessive luxuriance, throwing out shoots in all directions, with scarcely any blossoms, or pods; it succeeded best on the soils on which the Bourbon cotton grows, viz., light red loam mixed with gravel and sand. The method of cultivation, plucking and cleaning this cotton, is the same as that mentioned in the description of the annual cotton, and there can be no doubt, from the experiments which have been already made, that this plant would flourish in situations in which the Bourbon cotton has been succeessfully raised.

5th. The green seed cotton, or shem purthee. This cotton (called shem purthee from its dark red flower) is supposed to resemble the Brazil cotton, and is cultivated only as a shrub in flower gardens, it requires to be occasionally irrigated and is said to possess medicinal virtues; combined with other ingredients it is prescribed in inflammatory diseases by the native doctors.

6th. Shedda purthee. This cotton is also cultivated in gardens like the last, and both varieties grow to the height of 8 or 10 feet, and continue to bear for a period of 7 or 8 years, they are almost exclusively used by brahmins for making junjum, or the threads worn by them as a distinguishing mark of caste, or for lamps in pagodas.

* Within the last two or three years several American cotton planters have been sent out by the Court of Directors, for the purpose of renewing the experiment of cultivating this variety of cotton; and they are at present employed on certain farms in Coimbatore, under the superintendence of Dr. Wight.

The labourers employed in gathering cotton are paid in kind, about the value of one anna daily, of imperfect pods being given to them; and should the crop be good, and but little injured, the amount of hire is made up with a proportion of clean cotton.

A succession of cotton crops should never be grown in the same ground, as it impoverishes the soil, and the land should therefore be allowed to remain fallow, and be manured for one year at least, before cotton is again sown in it. The expense of cleaning cotton is covered by the sale of the seed.

A large portion of the cotton produce of Coimbatore is manufactured into piece goods, for the Trichinopoly, Salem, Mysore and Malabar markets, and a considerable quantity of cloth is likewise made up for Bombay, and the Persian gulf.

Tobacco. Tobacco is the ancient staple of this district, of which there are three kinds—the first and most valuable, is called by the natives vadamoogum, it is also called yevoo macuppal, and vutticuppal; from the thickness and softness of the leaf, its great pungency, and peculiar flavour, it is preferred for chewing by the natives on the western coast, which is the only market where it is saleable. This tobacco of the best quality is raised on land irrigated from wells, and should they contain salt-petre, the leaf is improved both in flavour and appearance, but its saline qualities render it unfit for smoking or making snuff. The vadamoogum tobacco however, raised in one part of the talook of Coimbatore, is an exception, as it is of excellent quality and fit for every purpose, and is capable of being preserved for a period of two years.

The second kind of tobacco is known by the name of tenmoogum, and is of the same description as that grown in the adjoining districts of Dindigul and Madura; the leaf is larger than that of the vadamoogum tobacco; it is raised by artificial irrigation, and is much preferred for smoking and making snuff, but is too harsh for chewing, and will not keep long, it is also in great request on the western coast.

The third kind is distinguished by the name of Ma-

nagherry tobacco, and is cultivated only on lands suited for dry grains, and is never irrigated, it is a perishable article, is considered of good quality for smoking and for snuff, but it is too bitter in flavour for chewing. Tobacco of a superior quality is produced in the talooks of Coimbatore, Pulladum, Cheyoor, Danaikencottah, Chuckragherry and Pullachey, and is exported to other districts, the villages in which it is cultivated being situated chiefly in alluvial plains; upwards of 4000 candies, are exported annually to south Malabar, Travancore and Cochin, large quantities are also exported to Trichinopoly, and to the Mysore country. The superiority of the tobacco grown in Coimbatore is attributable to the richness and suitableness of the soil for its culture, to its being irrigated from wells containing much salt-petre, and to the attention which is paid to its cultivation.

With regard to soil, Mr. H. Piddington in his paper on the analysis of soils read before the Agricultural Society of India in March 1836, states as follows " I believe the quality " of the tobacco to depend mainly on the state and quantity of " iron in the soil," and also adds " Colonel Hazeta and Dr. " Casanova are our authorities for saying that the tobacco soils " of the Havanna are red soils, and those of Manilla I know " are also red soil ; now the red and reddish brown soils con- " tain most of their iron in the state of peroxide, or the reddish " brown oxide of iron, while the light grey soils contain it " only in the state of protoxide, or the black oxide of iron, " and from an analysis of Arracan, Singour, and Hinglee soils, he says, " it will be seen, that the best tobacco soil we have " hitherto found in India, contains 16 per cent, or nearly one " sixth of iron, which is mostly in the state of peroxide, and " that the inferior sort of tobacco, grows in a soil, containing " only 6 per cent, of iron, which is moreover in the state of " protoxide, or black oxide."*

* Mr. Piddington from finding that the ashes of Havanna, and Sandaway Cheroots contained more of the peroxide of iron than the same quantity of the ashes of the Hinglee or best Bengal tobacco, thinks it highly probable, that the flavour of the tobacco to the smoker depends on the state and quantity of iron it contains, he also states that American and English tobacconists and planters colour and flavour their tobacco by using a solution of sulphate of iron which is decomposed by the potassa of tobacco, and sulphate of potassa and carbonate of iron, which is of an ochre yellow colour, are formed.

The above observations would seem to apply in a great measure, to the soils on which tobacco is cultivated in this district, as of the four kinds in which the plant thrives best, threc are red, containing the peroxide of iron, and the fourth, or black soil, in all probability contains the protoxide, in considerable quantity ; they are classed by the cultivators as follows ; 1st a black soil, having pieces of limestone, mixed with it, called "thersell"—2d a red soil, a mixture of sand and black soil, called "shenkersel"—3d a red soil, mixed with sand, called "sheral," and 4th a red soil, mixed with mud, called "puddagay." The tobacco is chiefly cultivated in garden lands artificially irrigated from wells, and water being near the surface, is always beneficial to the product. On the land intended for tobacco cultivation, it is a common practice previously to grow, a crop of raggee, cholum or other dry grain ; from May to September, the land lies fallow and sheep are folded on it, it is then prepared for the tobacco. The usual period for sowing the seed, in beds, is in Septem-ber and October, and for transplanting, November and De-cember, the produce being gathered in the months of March and April, of the following year. The land is ploughed 6 or 7 times and divided into beds, of about 5 or 6 feet square, the young plants are watered for 30 or 40 days successively, according to the nature of the soil, and when they have thrown out 3 or 4 leaves, are transplanted into beds, each containing about 20 plants—after which they are water-ed every second or third day until ripe ; at the end of about a month when it has thrown out 8 or more leaves, it is topped ; and if it is wished to render the leaf long, from 8 to 10 leaves only are left after topping ; but if short leaves are desired, from 10 to 12 are left. In the second month, the plant throws out buds, which are cautiously re-moved, care being always taken to keep them free from weeds. It comes to maturity in four months, and when cut it is spread out to dry. Keeping the leaves on the ground for more than one day is considered injurious to the tobacco, they sometimes however remain in the field for two days, but never longer. After the leaves have been gathered, they

are dried on the milk-hedge, which is supposed to impart a superior quality to the tobacco, but never on any other kind of hedge; and when this is not available, strong poles are driven into the ground, and the leaves are suspended from ropes affixed to them—the process of drying is continued in the open air for 15 days; should the weather be wet, or dews heavy, it is placed in sheds, but is never smoke-dried in this district. After hanging for 15 or 20 days, and having attained a reddish brown colour, it is collected into heaps under sheds, and turned once every third day, for nine days, when the leaves are stripped from the stalk, and tied into loose bundles containing 30 or 40 in each, which are again packed in heaps and frequently turned for 10 days more; the bundles are always packed with the stalk ends of the leaves outwards, the points meeting in the centre The last process is to tie the tobacco into parcels, weighing each about 4 lbs, containing ten or twelve bundles, when they are pressed with planks, and heavy weights, and occasionally turned to prevent their becoming injured by heat, it is then fit for the market. The tobacco raised in this district, is liable to deterioration, from scarcity of rain or of water in the wells, or from the effect of cloudy and foggy weather, and easterly winds. Should it not be sufficiently watered at the time of its being topped, the plant is liable to injury from the roots throwing out sprouts of a white appearance, resembling asparagus, called by the natives "caulum," which has the effect of preventing the full growth of the leaf, and of injuring its quality. When transplanted should the weather be unseasonably dry, the leaves of the plant become covered with spots, or scalds, known by the term "poryan," which are very injurious to the tobacco; and should the weather happen to be cloudy and foggy, at the time the plants are topped, or an east wind prevail, the leaves become white, as if ashes had been sprinkled over them, and are entirely destroyed, this blight is denominated "sambul."

The exhaustion of the land from the cultivation of tobacco is very great, rendering frequent and regular manuring ne-

cessary, it is therefore only cultivated every alternate year, with cholum and other dry grains. Tobacco is grown by all the agricultural classes, the richer ryots cultivating one third of their gardens with it, and the poorer classes one fourth; that which is exported may be estimated to cost on the spot Rupees 25, per candy of 500lbs. The American tobacco has been tried and cultivated in the same method as has just been described, it is however attended with more labour and expense; the plants are transplanted about 10 or 15 days later than the country product, and they are about a month longer in coming to maturity, and require more water. The product from the American seed is not so good for smoking or chewing, as the country tobacco, the leaves are larger and broader, but they are thinner, and have not the same strength and pungency of flavour, or, as it is technically termed among tobacco growers, "karrum."

Cattle, Buffaloes and Sheep. Coimbatore is well stocked with cattle, as the following statement of their numbers from the Jummabundy for 1836 will shew, cows 289,737, bullocks 260,111, female buffaloes 93,417, male buffaloes 27,446, sheep 425,520.

The bullocks and cows are of an excellent description, and are generally bred by the ryots on the pasture lands, which form a most valuable portion of their farms; when the pasturage fails, they are driven to graze in the jungly forests, near the western and southern hills. The best cattle are reared in the Colligal, Sattimungalum and Andioor talooks; the value of which is from 40 to 50 rupees per pair; that of the ordinary size, being from 20 to 40 rupees. Large cattle fairs are held annually in the months of April or May, at Avenashy, in the Cheyoor talook, and twice a year, in the months of February and October, in the talook of Colligal. At these fairs a superior kind of cattle is procured, which are sent to all parts of the Carnatic, being much prized for hackeries. Their colour is white, they are of a light make, bony, with large dewlaps, and very active. Some are brought to the Colligal fairs from Mysore, and from the adjacent part of Sa-

lem, but by far the greater portion is reared in the jungles, near the river Cauvery, within the district.

The breed of buffaloes, as might be expected from the very small extent of wet, or Nunjah cultivation, is of an inferior description; they are small, and not held in much esteem.

The breed of sheep, however, is excellent; and from their wool which is of a coarse kind, the cumblies and carpets in common use are made, the sheep are of a small size, and of a white, reddish brown, or black colour; they are easily fattened, and their flesh is of a very superior quality; some information in detail, received from the shepherds of this district, concerning the rearing, grazing, and diseases of sheep, will be found at the end of this report.

Silk. Silk is produced in small quantities at Colligal, it is however not of very good quality, and is of a coarser kind than the Mysore silk.

Ivory. Ivory may also be included amongst the products of this district, during the last four years, between 7 and 800 elephants have been either caught or destroyed, principally by the public establishment maintained for this purpose; the greater part of these have been females. The price of the largest and finest pair of tusks, is from 80 to 90 Rupees, and those of smaller size, from 40 to 60. Although the above is about the number of elephants, which is known to have been destroyed, both by the public establishment, and by private individuals, yet there is reason to believe, that many are killed by the inhabitants, which are never reported to the authorities. The government give a reward of 70 rupees for every elephant destroyed, at the same time taking possession of the tusks, but as the tusks of a full

grown elephant sell for more than the reward, they are therefore disposed of privately, the reward remaining unclaimed in these instances, and which are consequently not brought to account in the number killed.

A very remarkable circumstance occurred at an elephant hunt, which took place in this district in 1834. After the hunters had succeeded in driving a number of wild elephants into the coopum or enclosure, they observed that one of them, a female, bore marks on her ears, neck and legs, of having been at some previous time under restraint, or "tame," and on the usual words of command being called out to her, to their surprize she obeyed them. One of the mahouts seeing her so tame, ordered her to kneel, and had the courage to mount, and conduct her away from the others, and she has remained quiet ever since; about three weeks after her arrival at Coimbatore, she gave birth to a young male elephant, of a light pinkish fawn colour, or what is more generally known by the name of a "white elephant," which is considered by the natives of India, but more particularly by the Burmese, of great value; great care has consequently been taken of it, with a view to its being presented in the name of the government of India, to the king of Ava. This remarkable difference of colour seems to depend on the almost entire absence of the usual dark colouring matter of the rete-mucosum, as well as the pigmentum of the eye; thus apparently constituting it, an *albino* variety of the elephant.

Mineral products.

The principal mineral products of the province, are iron and steel, the ores of which, chiefly the brown hematite and black ore, are found in most of the sandy nullahs. At Topunpettah, a village about five miles to the northward of Coimbatore, the iron is produced by smelting a black sand. These ores are smelted in the ordinary native method, and from the metal obtained, nearly all the coulters of ploughs, mamaties, and other agri-

cultural, as well as domestic implements are made.

The most highly prized varieties of the Beryl, or Aqua marine, are the produce of this district; they are found near the village of Puttaley, in the talook of Kongyam, where they are stated to be associated with "Cleavelandite." A mine near that village was at one time worked by Mr. Heath, but is now closed. The largest specimen of Beryl said to be known, weighs six ounces, and is valued at £ 500, which, although supposed to have been found in Ceylon, it is probable may have been the produce of this mine.

Salt-petre in considerable quantity, is made in the district, and eighteen hundred candies were manufactured in 1836; it is said to be of inferior quality to that produced in other situations. The earth seems to contain the nitre ready formed, as no potash is added to it by the makers, it being procured simply by lixiviating the soil, and concentrating the solution by repeated boiling. Muriates are also procured by the same process, and by far the greater part of the salt used for culinary purposes, is prepared from the soil; sea salt or muriate of soda, being too expensive to be in general use amongst the poorer classes. In 1812, Mr. W. Garrow, at that time Collector of the district, estimated that 1,800 garce of salt, prepared from the soil, were consumed by the inhabitants; and although the importation of marine salt from the Malabar coast, has very much increased since that period, and its price has fallen considerably, yet even at the present time, by far the greater part of the poorer classes, from its cheapness, make use of the black impure and bitter mixture of nitrates, and muriates, called "*Attapoo*," or earth salt.

This salt as before stated, is procured in considerable quantity in the manufacture of salt petre.

Extent of cultivated and waste lands.

The extent of land actually under cultivation, amounts to 2,192,766 acres, and the uncultivated, or waste land, is at present about 1,096,561;

of the former 1,400,702 acres, are under dry, and 215,370 under wet cultivation.

The quantity of pasture land in the district amounts to 576,694 acres, which may be classed as follows:—

Pasturage,	dry land	549,954	Acres.
Do.	Garden do.	23,220	do.
Do.	Wet do.	3,520	do.

In the talooks of Pullachey, Chuckragherry, and a few villages in the talooks of Coimbatore, Pulladum and Dharapooram, the dry land yields two crops annually, whilst in the other talooks one crop only is raised. The wet land yields two crops in the talooks of Dharapooram, Chuckragherry, Sattimungalum and Errode, but one only is produced in the other talooks.

Revenue. The revenue derived from the province, in an ordinary year, may be estimated at twenty one lacs of rupees.

Roads. The principal roads generally speaking, between Coimbatore and the adjoining districts, are good, having lately been much improved, and still further improvements are in progress; the distance from Coimbatore, the capital of the province, to Madras is 315 miles, to Negapatam 220, to Trichinopoly 129, to Quilon by Choughaut 229, to Calicut by Choughaut 141, to Ootacamund 44, to Seringapatam 119, and to Bangalore 178 miles.

Population. The population as per last census, and the number of villages in each talook, are shewn in the following table.

NAMES OF TALOOKS.	Number of villages in each talook.	Population.		
		Males.	Females	Total.
Coimbatore	179	42,795	43,325	86,120
Sattimungalum	141	34,279	36,359	70,638
Danaikencottah	213	15,370	15,527	30,897
Colligal	149	24,237	21,194	45,431
Pullachey	127	27,237	31,630	58,867
Perindoray	147	28,400	29,073	57,473
Andioor	68	14,879	15,630	30,509
Errode	63	19,325	19,161	38,486
Dharapooram	41	25,490	25,278	50,768
Kongyam	42	29,377	27,987	57,364
Carroor	79	36,233	34,654	70,887
Cheyoor	105	21,447	21,567	43,014
Pulladum	89	41,398	42,589	83,987
Chuckragherry	88	30,614	31,333	61,947
Poligar Villages	50	10,173	11,403	21,576
Total	1,581	401,254	406,710	807,964

The inhabitants are almost all hindoos, the number of mahomedans, who reside principally in the talooks of Coimbatore and Colligal, being only 3,681; of christians, there may be estimated between 4 and 5,000 roman catholics, and about one hundred protestants.

Principal towns. The principal towns in the province are Coimbatore, Dharapooram, Bowany and Caroor.

Town of Coimbatore. Coimbatore stands in a high, dry, and well cultivated country, is neatly built, and consists of about twelve wide, well ventilated streets; it is situated according to the grand trigonometrical survey, in latitude 10° 59′ 41″ north, longitude 76° 59′ 46″ east, the height of the ruins of the old palace in the town, is according to barometrical measurements 1,483 feet above the level of the sea; its distance from the nearest hills may be about 5 miles. Although situated so far to the northward of the Paulghaut-

cherry pass, that it may be said to be clear of it, yet it is within the influence of currents of air, which prevail in the pass throughout a great part of the year. The town in ordinary seasons is abundantly supplied with water from wells, but being for the most part brackish, it is said to be the cause of cutaneous affections among the poorer inhabitants. The houses inhabited by the Europeans are substantially built, and generally well situated; they are placed to the eastward of the town, and with the exception of one near the jail, quite clear of it; the number of native inhabitants of the town of Coimbatore, may be estimated at about ten thousand. In the time of Hyder Ally, it is stated to have contained 4,000 houses, but it suffered much by the frequent wars between the British, and the Mysore sovereigns. Tippoo Sultan built a mosque here, and occasionally resided in the palace. At the village of Perura, about two miles to the S. W. of the town, there is a celebrated temple dedicated to Mahadeva, and called Mail, or High Chittumbra, to distinguish it from another Chittumbra near Pondicherry; this pagoda is said to be upwards of 3000 years old, and was one of the three hindoo temples spared by Tippoo, when he issued his order for the destruction of all idolatrous buildings, the pagodas of Mailcotta, near Seringapatam, and that of Seringapatam itself, forming the other exceptions.

On the south side of the town there is a tank of about three miles in length, which when full, forms a fine lake of very considerable extent. The nearest tract of jungle is distant 15 miles.

Town of Dharapooram. Dharapooram, situated in latitude 10° 47′ north, and longitude 77° 40″ east, within half a mile of the river Amberavatty, stands in a high and open country; its streets are straight and wide, and the houses are for the most part well constructed, there are here the ruins of a large mud fort, and in the vicinity is a considerable tract of well cultivated rice land.

Town of Bowany. Bowany is situated at the conflux of the rivers, Cauvery and Bowany, and is considered a place of great

sanctity by the Hindoos, and much resorted to by them, it is well built, and notwithstanding its peculiar locality, is dry and comfortable.

Town of Caroor. Caroor is situated in latitude 10° 55″ north, and longitude 78° 12″ east, and stands on gently rising ground, in a dry open country, on the north bank of the river Ambe-ravatty, near it are the remains of a considerable fort, in which there is a large temple. This town is very populous, and contains above 1000 houses. The small town of Pulla-chey, containing upwards of 300 houses, and situated in latitude 11° 47″ north, and longitude 77° 8″ east, also deserves to be noticed, as in its vicinity in the year 1800, a pot was dug up containing a great many Roman coins of the reigns of Augustus and Tiberius.

The smaller villages are for the most part exceedingly filthy, their streets are extremely narrow, and the inhabitants invariably throw the refuse of their meals into them, and also the sweepings of their houses, kites, and pariah dogs being the only scavengers. Many of the villages are surrounded by high fences of the Euphorbia tirucalli, or milk hedge, to protect them from the winds, but they of course considerably obstruct free ventilation.

The inhabitants, compared with those of many other parts of India, may be said to enjoy more comfort, their houses in the larger towns, being substantially built, and covered with tiled roofs, having a considerable slope in order to prevent the rains from penetrating. The houses of the richer classes consist of from two to five apartments, and for the most part, are dry and commodious; in the smaller villages however, they are generally built of mud thatched with leaves, and consist of but one apartment. The total number of houses in the district is 251,031; of which 15 are upper storied, 368 terraced, 11,101 tiled, and 239,546 thatched.

The whole of the wealthy inhabitants, and most of the class of cultivators, sleep on cots, especially in wet weather, and nearly all classes use coarse blankets or cumblies, made from the wool of the sheep of the district. Wood, of which there is an abundance in the neighbouring jungles, is the fuel in general use, with bratties made from cow-dung. The diet of the cultivating and poorer classes, consists of cholum, raghee, millet and other dry grains, with pulses, many of which are extremely nutritious, and upon which it is said three fourths of the population live, the remaining fourth, using rice as their principal article of food. Tobacco is consumed by all classes, either in chewing, smoking or as snuff. The rich use a considerable quantity of ghee, mutton, spices and vegetables.

Occupations. Cultivators. It may be estimated that about three fourths of the population are engaged in agriculture. The next most numerous class, is that of weavers, it being supposed that there are 14,000 looms in the district, and the number of people employed on them, inclusive of women and children, amounts to about forty five thousand.

Weavers.

The employment of the remaining part of the population is various, there is a numerous class of petty merchants and shop keepers, in the bazar, and many who gain their livelihood by fencing, dancing, and singing for the amusement of the rich, or by practicing as conjurers on the fears of the superstitious.

Customs. Each caste has its own customs, which as in other parts of India are connected with the numerous feasts, processions, and ceremonies appertaining to their religion; or with marriages, births and deaths.

The following information having been derived from some of the most intelligent inhabitants of the district, is inserted almost literally, as being somewhat curious and interesting.

Brahmins. Brahmins are required to perform the ceremonies of yaugum and yausamus, to read the vaidum or holy book, and to teach it to others; to give alms to the poor, and to have pity on distressed people; not to hurt or kill any creature, nor to do a dishonest action; to seek for salvation by observing regularly all daily ceremonies, such as bathing, reading prayers, and making poojah; to have their daughters married before they attain the age of ten years; to betroth their sons, or make the Oopanianum, or as it is called thread marriage, before they are ten years old, and to perform the loobaum ceremony after their wives come to maturity; to perform the sreemuntum ceremony at the sixth month of the wife's pregnancy, allowing the hair of the head to grow, which has not been shaved since marriage, till she brings forth; to perform the poonnyumjooum ceremony on the 10th day after a child's birth, and to make it eat rice at the age of six months, and have its head shaved, and to see that it is sent to school at the age of ten years.

When a Brahmin loses his father, the head and beard are shaved immediately, and he accompanies the corpse in the procession to the burning ground, carrying the fire to burn the body; after which, ceremonies are performed daily, till the 12th day, when the funeral is said to be concluded. The son of the deceased must allow the hair of his head to grow for one year, after the death of his father, during which time monthly ceremonies are performed; the anniversary of his father's death is also kept regularly during lifetime. If a man dies without leaving children, his brother performs the requisite ceremonies, and if he has no brother, his nephew, or an adopted son, or a person bought for the purpose, fulfils the office. The widows head is shaved, her jewels are all taken off, and she discontinues the use of turmeric powder, sandal wood, and all other cosmetics.

Sunnyassey. When a Sunnyassey or hermit dies, the body is let down into a pit, (into which salt has been thrown,) in a

sitting posture; and the head is beaten with cocoanuts until the skull is completely fractured; the pit is then filled with earth, over which a tomb is erected, a banian tree (Ficus Religiosa) is planted near the spot, and Poojahs are performed at these holy tombs.

It is estimated that there are 16,400 individuals of the brahmin caste in this district, and that there are about 100 pagodas, the duties of which are conducted by 500 brahmins, and these temples maintain about 2,000 dancing girls.

Bannyans. The Bannyan or komatie caste, observe the same rules as the Brahmins, with the exception that the funeral ceremony is concluded on the 16th day after death, and the widows are allowed to wear certain jewels.

Bainy Chetties. The Bainy Chetties another caste, marry their daughters after they arrive at puberty; they burn their dead, and their widows wear jewels; blacksmiths, carpenters, braziers, stone-cutters, and goldsmiths, also marry their daughters after they come to maturity, they bury their dead, and their widows use black clothes.

Kongoo Vellavers. The Kongoo Vellaver caste, marry their daughters when of age, and a barber ties the wedding rope round the neck of the bride. They marry their sons while yet children, to women of age, and the father may enjoy the son's wife till the latter is grown up; it is true that very few fathers avail themselves of this privilege, although no doubt exists of their possessing the privilege if they desire to take advantage of it.

They perform funeral ceremonies for three days only, and on the fourth mix boiled rice and sheep's blood into small balls, which they throw up into the air near the grave, for the purpose of pleasing the spirit of the deceased, and for propitiating their god.

Inferior Castes. In the Thawangoo Chetties caste, (a class of weavers,) the teloogoo chetties, and arasa pullies or labourers, chucklers, oodurs or tankdiggers and pariahs, widows may marry again, the children of the deceased husband being delivered to his relatives, and should a husband and wife become mutually tired of each other, they are at liberty to separate, and each again to marry.

These castes either burn or bury their dead, and among the teloogoo chetties when the elder brother dies, it is usual for the younger brother to marry the widow.

In the Kykalurs or weavers caste, should there be three or four daughters in a family, not more than two of them generally get married, the others being either given to some temple as dancing girls, or they become prostitutes.

Oor koravurs or basket makers; in this caste the husband may sell his wife in the same way as he would sell any other part of his property, and purchase another.

Oopoo karavurs or salt merchants, may marry four or five wives, and are very strict with regard to their chastity; if a woman is caught in adultery, the caste assemble and are authorized by their own customs to put both parties to death; this of course they cannot carry into execution, but it is suspected the woman is sometimes made away with by poison.

Schools. The number of schools in the district is about two hundred, at which Tamil, Teloogoo, Hindooee, and other native languages are taught. The schoolmasters receive from each pupil from two annas, to one rupee a month.

Medical Police. Medical police may be said to be unknown, as no means are taken for cleansing the streets in any of the towns, with the exception that in the town of Coimbatore, two scavenger's carts are employed for that purpose.

The only time at which any attempt at cleansing the streets of the villages is made, is before the celebration of the different religious festivals.

Mendicants. The number of beggars is estimated at 2,000, and these are fed daily by the richer natives, charitable acts being in much esteem among them.

Marriages &c. Registers of marriages, births and deaths, have never been kept. The average duration of life in adults is estimated at about 50 years, but cases of extreme old age, such as from 90, to 100 are not unfrequent; the average however in jungly parts of the district, is below that in those more cultivated.

Diseases, Fever. The disease which has at all times prevailed to the greatest extent is fever, a mild form of intermittent being the most frequent type, when however it assumes the remittent form it is often fatal. The native practitioners generally treat an attack of fever as follows, they first administer an emetic, generally composed of the powdered seeds of tettan cottay, or strychnos potatorum, and follow this up by a purgative, consisting of one or two grains, of the powder of the seeds, of the croton tiglium; if great heat of skin continues, it is repeated, but if the skin becomes cooler, about 10 grains of the powder of the bark of the Melia Azadirachta, is given two or three times a day, or a decoction of it combined with a warm aromatic such as green ginger, or the seed of bishop's weed. This which is the general method of treating an attack of fever, is in slight cases almost always effectual. In severe cases however, (and of these the quotidian is considered the most dangerous, and the quartan the most obstinate type,) and in remittent fever, their success is very indifferent, as by far the greater number of patients, either sink under the attack in a few days, or linger on for a time under visceral obstructions, such as a morbid state of the spleen, or liver. Besides the above remedies many others are used by the native doctors, or Vytiars, such as white arsenic, in doses not

exceeding the fourteenth or fifteenth part of a grain, twice a day, in conjunction with aromatics as cummin seed, the Conessi bark, or nerium antidysentericum, Lin: this bark is also given in the form of decoction in dysenteric affections. The cinchona bark was formerly supplied by Government, and ordered to be sold by the collector at a low price, the demand for it however was very small.

Bowel Complaints. Diarrhœa and dysentery are the two next most fatal, and common diseases, the native doctors are not in the habit of distinguishing between them, both being usually treated in the same way. The remedies given in these diseases, are the powdered pomegranate fruit, twice or thrice a day in milk, the patients at the same time using as diet, a sub-acid preparation of milk, called "tyre." Some Hakeems particularly Mahomedans, give a dose of castor oil at bed time, followed next morning by a small quantity of opium, and* bangh.

There are however innumerable decoctions used in the cure of these diseases, composed of stimulants, tonics, and carminatives, according to the fancy, or superstitious prejudices, of the prescriber.

Venereal. Venereal disease is very prevalent, and commits great ravages; strong purgatives are almost entirely relied on in its cure, when however calomel can be obtained it is always given, and continued till salivation is produced.

Guinea worm. Dracunculus or Guinea worm, is another very common complaint, its cure is generally attempted by extraction, and is always more or less tedious, the native doctors are generally successful, although occasionally the worm breaks in the attempt at its removal, when ill conditioned sloughing ulcers are apt to form, which are very difficult of cure; during the progress of extraction, and as it is supposed for the purpose of facilitating it, many Vytiams cover

* Hemp. Cunabis Sativa.

the part where the worm protrudes, with a paste composed of assafœtida, garlic and rice flour.

Small Pox. Small Pox has occasionally made its appearance, and has generally committed considerable ravages; the deaths from this disease have always borne a great ratio in the higher castes, who have still a great prejudice against vaccination, amongst the lower classes however, this prejudice scarcely exists, the number of children vaccinated monthly, being at present about 230.

Cholera has also broken out occasionally, and the deaths from it have always been very numerous.

Jail. The jail is a square building, situated at the south eastern extremity of the town of Coimbatore, its position cannot be said to be very good, as it is placed close to a tank, round which at times there is a considerable extent of swampy ground, and it is also surrounded by ground broken into water courses and nullahs, in which after rain, the water for a time forms stagnant pools the receptacles of filth of every kind.

The jail contains 22 cells, 18 of which are 24 feet long, and 18 broad, they were formerly very low, and ill ventilated; very considerable improvements have however lately been made in them, having been raised from 9 to 12 feet, and in place of small circular apertures, 18 inches in diameter, on each side of the door ways, large iron barred windows, 4 feet high by 3 feet broad, have been substituted, with ventilators in the roof. The number of prisoners it is capable of containing, is 275, at 15 per cell, free accommodation being allowed, or 360, at 20 per cell which would however be rather crowded.

The ventilators in the solitary cells have likewise been much improved

Hospital. The hospital situated on the extreme right of the square, is a ward of the jail 24 feet long by 14 feet broad, into which air is admitted by three windows of the same size as those in the other cells. The windows being all on one side.

The prisoners work daily, Sunday excepted, from 7 A. M. till noon, when they rest for one hour and take food, and again work till 4 P. M,. See table at the end of the report, for diet, clothing, labour, &c.

Diet. The chief article of diet is cholum, those prisoners however who come from the Malabar coast, where rice is the principal food are allowed it, and the medical officer is authorized to order whatever food he may consider requisite, for patients in the hospital.

The prisoners who are fed on cholum, cost each 5 annas 10 pice per week, 100 rupees weight of cholum being valued at 6 pice ; 4 pice worth of curry stuff allowed to each person is included in the above amount ; those who eat coarse rice, cost each 6 annas 10½ pice per week ; 80 Rupees weight of rice being valued at 7½ pice—the allowance of curry is the same as for the others.

The following tables shew the nature, and amount of disease, and mortality which have occurred amongst the prisoners during the period of ten years, from 1829 to 1838 inclusive.

JAIL OF COIMBATORE.

No. 4.—*Table exhibiting the Number of Admissions and Deaths* *the Convicted Prisoners, from each Class of Disease, for* 10 *years.*

CLASSES	DISEASES.	From 1829 to 1838. Aggregate strength 1,561 — 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions & deaths from each class of Disease. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each class.	Total Deaths from each class.	Average percentage of sick to strength.	Average percentage of Deaths to sick.
Fevers......	Febris ephemera	0	0	0	0	293	18	356	19	649	37	41 ·575	5 ·70
	,, intermit quot.	216	6	249	8								
	,, remittens....	1	0	0	0								
	,, continua.....	76	12	107	11								
	Cholera	60	38	11	9	60	38	11	9	71	47	4 ·548	66 ·19
Diseases of the Abdominal viscera......	Diarrhœa	172	44	314	89	180	47	325	92	505	139	32 ·351	27 ·52
	Dysenteria acuta et chronica.	7	3	7	3								
	Obstipatio......	1	0	4	0								
	Hepatitis acuta et chronica...	1	0	0	0	1	0	0	0	1	0	0 ·064	0 ·0
Diseases of the Lungs.	Catarrhus......	2	0	2	0	2	0	2	0	4	0	0 ·256	0 ·0
Diseases of the Brain..	Epilepsia	1	0	2	1	1	0	2	1	3	1	0 .192	33 ·3
Eruptive Fevers......	Variola........	21	0	14	2	40	0	17	2	57	2	3 ·651	3 ·5
	Varicella......	19	0	3	0								
Dropsy.....	Anasarca.......	33	15	37	20	33	15	37	20	70	35	4 ·484	50 ·0
Rheumatic affections.	Rheumat. acutus et chronicus.	39	0	38	1	39	0	38	1	77	1	4 ·932	1 ·2
Venereal affections..	Syphilis primitiva..........	3	0	1	0	5	0	4	0	9	0	0 ·576	0 ·
	Hernia humoralis............	2	0	3	0								
Specific diseases.....	Atrophia.	1	0	0	0	145	1	35	1	180	2	11 ·531	1 ·
	Lepra..........	1	1	0	0								
	Dracunculus....	140	0	34	1								
	Elephantiasis...	1	0	0	0								
	Scrophula......	2	0	1	0								
Diseases of the Eye...	Morbi Oculorum..........	12	0	14	0	12	0	14	0	26	0	1 ·665	0 ·
Diseases of the skin..	Morbi cutis.....	44	0	24	0	44	0	24	0	68	0	4 ·355	0
	Other diseases..	448	7	531	5	448	7	531	5	979	12	62 ·716	1
	Total....	1303	126	1396	150	1303	126	1396	150	2699	276	172 ·901	10

JAIL OF COIMBATORE.

No. 5.—*Table exhibiting the Number of Admissions and Deaths, of Prisoners under Trial, from each Class of Disease for* 10 *years.*

CLASSES.	DISEASES.	From 1829 to 1838. Aggregate strength 387. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions & deaths from each class of disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Average percentage of sick to strength.	Average percentage of deaths to sick.
Fevers......	Febris ephemera	0	0	0	0	9	2	6	4	15	6	3 ·875	40 ·0
	,, intermit. quot.	6	0	1	1								
	,, continua......	3	2	5	3								
	Cholera.........	22	13	1	1	22	13	1	1	23	14	5 ·943	60 ·869
Diseases of the Abdominal viscera......	Diarrhœa.......	7	6	19	8	9	7	21	10	33	17	8 ·527	51 ·515
	Dysenteria acuta et chronica.	2	1	5	2								
Do. Lungs..	Pneumonia.....	0	0	1	1	0	0	1	1	1	1	0 ·258	100 ·0
Do. Brain..	Apoplexia......	1	1	0	0	1	1	0	0	1	1	0 ·258	100 ·0
	Paralysis.......	0	0	0	0								
Eruptive fevers..	Variola.........	4	0	1	1	6	0	2	1	8	1	2 ·067	12 ·500
	Varicella........	2	0	1	0								
Dropsy....	Anasarca, ...	2	2	2	0	2	2	2	0	4	2	1 ·033	50 ·0
Rheumatic affections.	Rheumatismus Acutus.....	1	0	3	2	1	0	3	2	4	2	1 ·033	50 ·0
Venereal affections..	Syphilis Primitiva..........	0	0	1	0	1	0	1	0	2	0	0 ·516	0 ·0
	Gonorrhœa.....	1	0	0	0								
Specific diseases.....	Dracunculus....	6	1	0	0	6	1	0	0	6	1	1 ·550	16 ·666
Do. Skin...	Morbi Cutis.....	3	0	2	1	3	0	2	1	5	1	1 ·292	20 ·0
	Other diseases .	17	3	17	2	17	3	17	2	34	5	8 ·785	14 ·705
	Total....	77	29	59	22	77	29	59	22	136	51	35 ·142	37 ·500

Remarks on the preceding tables of disease.

The average annual numerical strength of the convicted prisoners during the ten years, has been 156, and the admissions 270, or nearly 173 per cent, and the number of deaths annually during the same period, has averaged 27, or 17. 680 per cent on the strength.

The admissions were greatly increased in the years of famine, 1833 and 1834, when the mortality was also much above the usual average, and again in 1837, (also a year of scarcity) occasioned almost exclusively by diarrhœa of a severe form,

cholera, and anasarca; in these three years 175 deaths occurred, and 1414 sick were treated, more than one half of all the admissions, and somewhat less than 2-3ds. of all the mortality. The average strength in these years amounted to 220.

The most numerous admissions have been from *fever*, *bowel complaints* (especially *diarrhœa*,) and *dracunculus* in the class of *specific diseases*—under the head *other diseases*, are included 129 admissions from "*punitio*." The greatest mortality has been occasioned by *bowel complaints*, *cholera*, *fever* and *dropsy*.

The number of prisoners under trial are few, the average strength being below 40; the diseases have been much the same as amongst the convicts, but more fatal.

Fever. With regard to *fever*, the most prevalent type is the intermittent, while the continued form is most fatal; of the latter type it may be remarked that no cases are entered in the returns till toward the end of 1836, while from that period up to 1838, no fewer than 183 cases are recorded with 23 deaths; on the other hand, all the cases of the intermittent type occurred during the first eight years, while no case is entered on the returns during 1837 and 1838; in 1833 and 1834 the admissions of this form amounted to 270, with 7 deaths.

Cholera. *Cholera* prevailed as an epidemic in 1829, 1833 and 1834, and of the number of cases seen on the table No 4—59 admissions, with 37 deaths, took place in these years. It is remarked with regard to this disease, that when it has occurred in an epidemic form, the cases were fewer in number comparatively in the town of Coimbatore, than in other parts of the collectorate, which has been attributed to its high and dry site, and to the streets being wide and well ventilated; it may however also be partly owing to the people being in better circumstances, and living on better food, and in more comfortable houses than in other parts of the district.

With regard to the treatment, the stimulating plan has been invariably adopted.

Diarrhœa. Of the class of bowel complaints *diarrhœa* claims attention, not only from the number of cases recorded, but also from the great mortality it has produced. This disease is always present in the jail, but in 1833,34 and 37, it may be said to have been epidemic, no fewer than 344 admissions, with 93 deaths having taken place in these years. The character of the disease will be seen from the following extracts from two of the medical reports.

" Diarrhœa has prevailed as an epidemic not only amongst the inmates of the jail but throughout the whole collectorate, occasioned by the unwholesome food on which the lower orders have been subsisting for many months past, viz. leaves, plants and roots. The jail has been filled with prisoners from various parts of the district, and many of them on admission were reduced, from long continued disease to a state of extreme emaciation ; and although nutritious diet and stimulating liquids were allowed them, at first cautiously and afterwards liberally, with opiates, and medicines of an astringent and tonic nature, the system in many instances could not rally, and the patient seemed to sink simply from exhaustion."

" The *post mortem* examinations verified this, inasmuch as with the exception of a few cases exhibiting slight traces of sub-acute inflammation of the external coats of the cœcum or ascending colon, the greater number shewed a pale bloodless state of the bowels, the mucous coat being covered with thin feculent matter, and generally an effusion of serum in the abdominal cavity." Dated 31st December 1833.

" From these circumstances (scarcity of food &c.) the inhabitants have been reduced to the necessity of subsisting on pumpkins, the white and succulent part of the leaf of the common aloe, and several kinds of roots, plants and leaves ; disease particularly diarrhœa has consequently been very prevalent amongst them. From the dread of starvation many have committed crimes, such as cattle and sheep stealing, and immediately confessed their guilt for the purpose of being sent into jail, to procure food at the expense of their liberty."

"The cases of this disease have been numerous, and it has proved peculiarly obstinate and fatal—nor could it be otherwise from the wretched state of the half starved and emaciated objects, which have in most instances been the subjects of it. In the treatment, opiates, tonics, astringents with wine, were found to be more beneficial than any other remedies; and blisters were occasionally applied over the abdomen." Dated 30th June, 1837.

Anasarca. The next disease requiring special notice is *anasarca*, the number of deaths being 35 out of 70 admissions, of which 45 cases, with 19 deaths took place in 1833 and 1834. Dropsical affections such as œdema, anasarca and ascites were frequently attendant upon diarrhœa, and intermittent fever. *Post mortem* examinations exhibited an exsangineous condition of the various tissues, the stomach and bowels were pale, tympanitic, preternaturally transparent, and filled with a dirty muddy fluid—the liver and spleen were shrunk and pale; the pericardium in every instance contained several ounces of fluid—and the substance of the heart when cut into, appeared as if it had been macerated.

In the treatment, stimulants internally and externally, diuretics and tonics were found most useful in checking the disease, and invigorating the system.

Dracunculus. In the class *specific diseases*, *dracunculus* merits a few remarks. It is endemic in this part of the country, and has prevailed more or less every year during the period embraced in these remarks. The period of the year in which it is seen is the dry hot season, comprehending the months of April, May, June and July, and it is worthy of observation, that the cases of this disease have been most numerous in those years in which the monsoon either entirely, or partially failed—when the tanks were nearly all dried up, and the supply of water failed in most of the wells.

The disease attacks men, women, children and adults,

the robust and emaciated indiscriminately; in most cases from two to four worms have been extracted, but in several, as many as twelve have been removed. The locality of the worm is generally in the lower extremities, about the foot and ankle. The usual native plan of treatment was had recourse to, viz. careful slow extraction, which although a tedious operation, has in almost every case proved successful, and in but few instances has it been followed by ill conditioned sores, which are so often troublesome in this disease. One death is recorded and as the case is of some interest, it may be here briefly noticed. The patient was admitted on the 10th May 1836, with a worm presenting immediately below the right external malleolus. The usual mode of extraction was resorted to, and the case went on favorably till the 13th June, when tetanic symptoms appeared, of which the patient died on the 22nd of the same month. Some irritation at the site of the worm is supposed to have been the cause of the tetanus. In the treatment blood was drawn to the extent of ℥xvj, on the first day, and opium was then given in large doses, according to the urgency and frequency of the spasms; of this medicine, in ten days, the patient took 652 grains. On the 3d, 4th, and 5th days of treatment, the symptoms abated very much, and hopes of a cure were entertained, but on the 8th and 9th, the spasms again became very violent, and resisted all the means had recourse to.

Amongst the class of other diseases, *ulcers* form a large majority, and as already stated, 129 admissions were from *punitio*, which seldom however exceeded two dozen lashes.

Sepoys health of. There is always a detachment of sepoys at Coimbatore, amounting to about 150 men, with two European officers, a captain and subaltern. The sepoys huts are situated close to the town, and the sick of the detachment are treated in a temporary building in the jail compound. Fever of the quotidian type is the most prevalent disease, it is however generally of a mild form, and easily cured by the ordinary means, such as an emetic and purgative

exhibited at the commencement, and subsequently quinine or bark. A tabular view of the sickness in this and the other detachments of native military, at the various civil stations in this division, is given at the end of this report.

REMARKS ON THE BREED OF SHEEP.

The following particulars regarding the breed of sheep, have been obtained from the native shepherds. Ewes become big with young in the months of March or April, and usually bring forth one lamb, in August or September, the rams being separated from them at this time. The lambs are not allowed to go out with the dams till they are one month old, at the end of this period however, the teeth begin to appear, when they are sent with them to graze. Sheep are turned out at 7 o'clock A. M., and are brought back to the folds or sheds, at 6 in the evening throughout the year.

Rams generally live to the age of eight or nine, and ewes to about seven years.

Soon after the birth of a lamb, the shepherd examines its colour, and other marks, and gives it a name according to its sex, such as *Kelamullah* to a ram, and *Kelamully* to an ewe the name of a *ram ending* always in *mullah*, and that of a ewe in *mully*, if the sheep from one flock should happen to stray into that of another shepherd, the owner at once recognizes it by its marks and colour, or the shepherd of the flock which it has joined, seeing that it is a stranger, turns it out. Every shepherd knows all the sheep in his flock, and he never counts them either when letting them out of the shed in the morning, or when shutting them up at night

Sheep are shorn annually in the month of January after the age of one year, the fleece of the back only is preserved, that on the other parts being rejected as useless.

The diseases to which they are subject are the following,

puffing of the belly, called by the natives *coodoonovoo,* is very frequent, and is treated by cauterizing the abdomen with a hot iron, and by squeezing the juice of a certain leaf, called oonawoodee, into the animals mouth. *Mungee-novoo* or diarrhœa, prevails during the monsoon, the remedy employed for its cure is water, in which boiled cumboo rice has been steeped for some days, great numbers however die of this disease. Another disease peculiar to sheep is called *joralavettee-novoo,* the animal it is said when attacked by it, immediately falls down and dies in a very short time; this disease occurs only in the month of September.

Kodul-novoo or bloody flux, is not unfrequent, it is also treated by cumboo rice water, and the shepherds say, that the flesh of a sheep dying of it, induces a similar complaint in persons who eat it.

The value of a sheep is from two annas to one rupee, but if in very good condition it brings two rupees. Each shepherd generally has charge of fifty sheep, for which he is paid at the rate of 20 bullahs of grain per mensem, with an allowance in money of 4 fanams to purchase a cumbly, 1 fanam to purchase slippers, and 1 fanam for a cloth, annually.

In a flock of a hundred sheep all the rams are gelded, except four or five, this operation is usually performed in the month of September, when the animal is between one and two years old, but never at a later period. The wethers are fattened, with cotton seed, mixed with gram.

PAULGHAUTCHERRY.

Situation. Paulghaut in latitude 10° 45 north, and longitude 76° 38 east, is situated in a gap in the western ghauts 20 miles broad, and is distant from the sea, Elevation. at the nearest point on the western coast, about 45 miles, being elevated 800 feet above its level.

The surface of the country is undulating as far as the hills, which rise abruptly on either side, distant 7 miles to the north, and 13 to the south. In the eastern or inland direction, the country rises gradually for several miles, and towards the westward, there is a gentle descent to the sea.

Winds. The prevailing winds which are either easterly or westerly, are greatly influenced in their direction by the funnel like shape of the pass through the ghaut, which is more than twice as wide at the western opening, as at the eastern, northerly or southerly winds being very rare.

Mountains. The exact height of the neighbouring hills has not been ascertained. They are irregularly wooded to their summits, and are uninhabited, being very feverish during certain months in the year. In March and April considerable annoyance is felt from the heat occasioned by the spontaneous combustion of the jungles on these hills, large tracts of which are seen burning for many days in succession, but no inconvenience, further than the increase of temperature, is thereby occasioned.

Rivers. There are two rivers in the neighbourhood, the Canady about two miles to the north, and the Calpathy about one mile to the south, both running in a westerly direction. The former is fed by various streams from the hills, forming throughout the year a considerable body of water,

by means of which much timber is floated to the coast. The other stream rising in the adjoining district of Coimbatore, is smaller and more rapid, and after long droughts it is reduced to a mere succession of pools, connected by small streams. The beds of both consist of white sand, and in some places they are rocky, no slimy deposit being left on them. The banks are irregular, being pretty high in some places, and low and sloping in others. The vegetation on the one to the north is generally tall and luxuriant, whilst the banks of the southern stream are more open, and they do not seem in any way to affect the salubrity of the station.

Tanks. There are no tanks of any size in the neighbourhood, and the country from its undulating surface is well drained; noxious morasses however are found at the foot of the hills.

Noxious morasses.

Climate. The climate of Paulghaut throughout the year, is on the whole very favorable, both for Europeans and natives, but is more so for the former, than for the latter. The south-west monsoon during the months of June, July, August and September, moderates the temperature, and in the two succeeding months occasional showers occur from the north-east, which render the weather cool and pleasant, not only in these months, but also throughout the whole of December. Rheumatism and catarrhal affections accompanied with fever, are prevalent in the wet season; and scarcely any Europeans escape without suffering from catarrhs. In December and January the jungles become feverish, and early in January the heat begins to increase, and vegetation to dry up; strong land winds set in about the beginning of February, and continue all March and part of April; but the station is healthy at this season, with the exception of the prevalence of acute *conjunctivitis*, called country sore-eyes.

The weather in the latter part of April and in May, is

changeable and uncertain. The following is a copy of a register kept at this station for the year 1837, and with much accuracy.

Year and Months.	The range of the Thermometer throughout the month taken at the hottest part of the day.	REMARKS.
1837 January.	83° to 87°	Heat gradually increasing; pleasant for the first half of the month. Hot during the latter half, nights cold; strong easterly winds. Very dry, but not hot, though very disagreeable. Jungle fever at Walliar and the hills. Fever very prevalent over all the country.
February	About 90°.	Strong hot land wind during the day, but sea breeze in the evening. Mornings, evenings and nights tolerably cool.
March	Not registered.	For the first three weeks a strong hot land wind from the east. Sea breeze in the evenings. Nights and mornings tolerably cool. During the last 10 days the land wind was very changeable; blowing occasionally from different points, nights cool.
April	84° to 87½°	First four days, hot land winds, the rest of the month the weather was cooler from several showers that had fallen, and no wet tatties required.
May	79° to 93½°	Weather tolerably cool the first ten or twelve days, towards the middle of the month it became very hot, three or four close nights, but the evenings and mornings and generally the nights were very pleasant. About the 20th very cloudy and the sun seldom visible; and for the last week the weather was showery and the thermometer under 80°.

Year and Months.	The range of the Thermometer throughout the month taken at the hottest part of the day.	REMARKS.
June	75° to 84°	The monsoon extremely light no heavy rain, but weather very cloudy and showery, and remarkably pleasant.
July	71½° to 76½°	Rainy throughout the month, the sun seldom seen. The rivers full in the latter part of the month. Air very damp.
August	72½° to 79½°	Rain occasionally heavy. Weather pleasant.
Sept.	77½° to 83½°	The weather fine. A little rain the first four or five days, after which none till the end of the month.
October	80° to 86°	Weather fine but with occasional showers, some times close and oppressive before rain.
Nov.	75° to 83½°	The first six days fine, and till the 20th, a good deal of rain fell ; the rest of the month dry. During the latter half strong easterly winds prevailed—very little dew in the morning for the season, but cold.
Dec.	81° to 86°	Weather cool and pleasant, nights cold. Feverish on the hills and Walliar-jungles. Common fever prevalent over all the country. Jungles on the hills on fire.

Soil. The soil throughout the district is generally light and productive, though not so fertile as in the neighbouring country of Coimbatore ; and the high grounds consist of red gravel and laterite.

Water. The water of the rivers and wells is pure, and at no season do noxious exhalations arise from them, but the morasses at the foot of the hills already alluded to, exhale at

the commencement and termination of the monsoon, strong febrific miasmata.

Agriculture. Agriculture is in a very thriving condition, every available spot of land being cultivated, and the harvest is always certain, the rains seldom or never failing. Rice is the principal grain produced.

Roads and communications. Paulghaut is the point of meeting of the roads between Coimbatore and the Malabar coast; the facility with which the ghaut here is ascended, rendering it a great thoroughfare. Five roads proceed from hence, three to the westward, and two in the opposite direction, the principal of which is the great Coimbatore road, affording a safe and pleasant line of communication; the others are comparatively narrow, and generally in bad repair.

Population. The population of the talook amounted in 1838, according to the best information procurable, to 1,01,313 souls; of whom 53,056 were males, and 48,257 females. No records of marriages or births have been kept.

Diseases. Fever of an irregular quotidian type, and not unfrequently complicated with affections of the chest, is common in December and the beginning of January; and severe jungle fever becomes prevalent at the same time, amongst the natives living near the morasses at the foot of the hills, and at Walliar, in the jungle. Paulghaut with rare exceptions experiences an annual visitation of cholera; the cases though not numerous, are generally severe.

Ophthalmia. The country sore eye is very prevalent during the months of April and May, amongst Europeans as well as Rheumatism. natives; and rheumatism is also common during the hot season.

The Cantonment. The military cantonment of Paulghaut, including the fort, stands on slightly undulating and open ground, and consists of the *regimental lines*, *mess-house*, *officers dwelling houses*, and a *parade ground*. The fort

The Fort and its situation. is situated at the south-east corner of the cantonment; it is a square fortification having round bastions and curtains, surrounded by a ditch 21 feet deep, and 15 broad; the area inside measuring 150 yards square. The buildings within the fort are placed near the walls leaving an open space in the centre, and consist of the *place of arms, barracks, magazine, store rooms, solitary cells* and *hospital*; The Hospital. the hospital is 87 feet in length by 17 in breadth, and is raised about 3 feet from the ground. An open verandah 6 feet wide surrounds the building, which consists of three rooms, the smallest is used as a surgery, and the others as wards for the sick; the building is tiled, and is at all seasons dry and comfortable. The rooms are lofty and well aired, and are in every way suitable for the accommodation of sick, to the number of about 30. The locality of the hospital is unexceptionable.

Wells. There are two wells in the fort, both of which contain water during the entire year. The water of one is not used, but that of the other is pure and good. The fort ditch also contains water throughout the year, in the monsoon it is from 10 to 12 feet in depth, but in the dry weather it is low and becomes covered with weeds; no noxious exhalations however, arise from it, and the water is always fit for drinking.

The lines &c. The lines lie 408 yards to the north of the fort, the parade ground intervening; the subsoil is for the most part laterite, and is soft and clayey in some places. The sepoys lines consist of a main street 25 feet wide, running north and south, crossed at right angles by eight streets, of 15 feet wide ranged at equal distances, spaces being allotted to the men in certain defined proportions; Extent of ground allotted to each man. a sepoy's hut occupies 30 feet by 10; a havildar's two such shares; a jemadar's two and half; and a subadar's three and a half. The streets are kept clean by means of gutters on each side.

Two wells faced with brick have been sunk in the lines, one of which is dry in the hot weather, and has long been disused; the other however always contains a supply of good water, but the natives prefer that obtained from a tank in the vicinity. The mess-house and officer's quarters lie westward of the fort and parade, and are scattered over a considerable space of ground.

The following table will shew the nature of the more prevalent diseases at this station, it is proper however to premise that no troops were stationed here in 1832 and 1834, and during the first half of the year 1838; while one entire regiment was located here in 1831, 33, 35, 36, and 37, and only one company in 1829 and 1830, and the latter half of the year 1838.

No. 6.—*Table exhibiting the number of Admissions and Deaths, amongst the Native troops stationed at Paulghautcherry, from* 1829 *to* 1838, *exclusive of* 1832 *and* 1834.

CLASSES.	DISEASES.	Aggregate strength 3896. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions & deaths from each class of Disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total Deaths from each class.	Average percentage of sick to strength.	Average percentage of deaths to sick.
Fevers......	Febris ephemera	93	1	70	0								
	,, intermitt quotid	57	1	105	0	220	7	227	2	447	9	11 ·473	2 ·013
	,, remittens..	7	2	2	0								
	,, com continua..........	63	3	50	2								
	Cholera..........	6	3	8	5	6	3	8	5	14	8	0 ·359	57 ·142
Diseases of the Abdominal viscera......	Diarrhœa.......	19	1	59	2								
	Dysenteria acuta et chronica	5	2	10	2								
	Obstipatio......	25	0	18	1	162	3	165	5	327	8	8 ·385	2 ·446
	Dyspepsia......	110	0	76	0								
	Hœmorrhois....	3	0	2	0								
	Hepatitis acuta et chronica...	0	0	5	1	0	0	5	1	5	1	0 ·128	20 ·000
Diseases of the Lungs.	Catarrhus......	31	0	18	0								
	Asthma........	8	0	33	1								
	Phthisis pulmonalis..........	2	2	0	0	47	2	54	1	101	3	2 ·592	2 ·970
	Pneumonia.. ...	4	0	1	0								
	Dyspnœa	2	0	2	0								
Diseases of the Brain	Apoplexia......	0	0	0	0								
	Epilepsia.......	1	0	1	0								
	Paralysis	2	0	0	0	10	0	3	0	13	0	0 ·333	0 ·000
	Mania...........	3	0	0	0								
	Delirium Tremens	4	0	2	0								
Eruptive fevers.......	Variola..	9	0	3	1								
	Varicella.......	21	0	3	0	32	0	12	1	44	1	1 ·129	2 ·272
	Erysipelas......	2	0	6	0								
Dropsies....	Anasarca.......	1	0	8	0	4	0	10	1	14	1	0 ·359	7 ·142
	Ascites....	3	0	2	1								
Rheumatic affections.	Rheumat. acutus et chronicus	109	2	190	2	109	2	190	2	299	4	7 ·674	1 ·337
Venereal affections ..	Syphilis primitiva...........	49	0	28	0								
	,, consecutiva..	5	0	1	0								
	Gonorrhœa.. ..	11	0	21	0	77	0	51	0	128	0	-3 ·285	0 ·000
	Hernia humoralis..............	7	0	3	0								
	Strictura urethrae.........	5	0	0	0								
Specific diseases	Dracunculus....	7	0	1	0								
	Scrophula	5	0	2	0	21	2	15	1	36	3	0 ·924	8 ·333
	Atrophia........	9	2	12	1								
Diseases of the Eye...	Morbi Oculorum...........	168	0	54	0	168	0	54	0	222	0	5 ·698	0 ·000
Do. skin..	Morbi Cutis....	228	0	365	0	228	0	365	0	593	0	15 ·220	0 ·000
	Other diseases..	473	3	538	1	473	3	558	1	1031	4	26 ·463	0 ·387
	Total.	1557	22	1717	20	1557	22	1717	20	3274	42	84 ·034	1 ·282

PROVINCE OF TRAVANCORE.

Situation boundaries &c.

The country of Travancore lies between the eighth and tenth degrees of north latitude, and the seventy sixth, and seventy eighth degrees of east longitude. It is bounded on the north by Malabar, on the west and south by the sea, and on the east it is separated from the Tinnevelly district, by a range of hills running from Paulghautcherry to Cape Comorin.

Subdivisions.

This Province contains three districts, viz. Trevandrum, Cochin and Quilon. The district of Trevandrum is divided into northern and southern portions, and these again are subdivided into what are called *Adigaroons*, of which Vunjeoor, Paulcolum, Wutwoorkaou, Cullicootum and Thoneycull lie in the northern division; Nelmun-puttum, Ooloor, Colatoor and Pulleapooram comprise the southern portion, in each of which there are several villages.

Trevandrum.

Trevandrum the capital, is situated in latitude 8° 30′ N., and longitude 77° 12′ E., about a mile and a half in a direct line from the sea coast, with which it is nearly on a level. It consists of a fort, in which the Rajah and his family reside, and a large town outside the walls, extending chiefly towards the north, at the extreme end of which are the barracks, and the old cantonment formerly occupied by a regiment of native infantry, and a detachment of artillery. A mile to the east of the fort, and considerably elevated above it, is the Residency, in the neighbourhood of which the medical officer resides, the hospital and the lines for the escort being close at hand. The fort is about half a mile square, has no ditch, and the walls are built of mud, with the exception of some parts of the west and the north sides, which are faced with stone.

The surrounding country has a broken and uneven aspect, presenting a series of hills covered with low bushes, with valleys of considerable extent intervening. The valleys have a rich alluvial soil, and are usually under wet cultivation.

Rivers & Canals. The rivers in the neighbourhood are the Keliar, and the Caramany, which take their rise in the hills about 30 miles to the east, and both passing south of the fort, one at the distance of about a mile, the other two miles, empty themselves into the sea. Further south, the rivers of greatest importance are the Cadayaur, and the Paralayaur, which after uniting to form the Tambrapoorny, run into the sea about 15 miles below their junction; still nearer to Cape Comorin is the Pallayaur, having its origin also in the hills, but augmented by a canal connecting it with the Paralayaur, from which it is partly fed; on these streams in a great measure depends the irrigation of the southern and most productive parts of Travancore, and works at a great expense, were constructed many years ago for the purpose of securing a supply of water to the neighbouring country, by means of canals; a canal and dams were made to conduct the water of the Cadayaur—which now passes to the sea—into the Paralayaur, but when the work was completed, it was found to be utterly useless, correct levels not having been taken in the first instance. From a late survey of the country however, between the two rivers, it is proved that such a work is quite practicable, and as the revenue resulting from it, would doubtless soon repay the expense of the undertaking, it is believed to be in contemplation to carry it into effect, under European superintendence.

A canal about forty feet wide runs to Quilon, distant forty miles, with but a partial interruption; it is supplied with water chiefly from the sea flowing over bars and consequently rises and falls with the tides; occasionally during the rains, it is in some places made subservient to cultivation, by throw-

ing up bunds to prevent the influx from the sea, but generally from the mixture of salt-water, it is rendered quite unfit for that purpose. This canal will be further noticed under the head "means of communication."

Tanks. In the southern part of the country, there are great numbers of tanks both large and small, chiefly supplied from the rivers just mentioned, but all have for a long time been neglected, and are insufficient for the proper cultivation of the paddy lands in the vicinity. In the neighbourhood of Trevandrum there are only two or three small tanks, and further north they are still more rarely met with.

Wells. Wells are common throughout the country, and the water is generally good, but in the vicinity of the rivers, the natives prefer using water obtained from them.

Mountains. The range of mountains seen about thirty miles to the east, form a part of the great chain of the western ghauts, which broken near Paulghautcherry, again rise 13 miles south of that place, and continue to run southerly until they terminate at Cape Comorin; their respective heights have not been exactly ascertained, but some of them are from 4 to 5,000 feet above the level of the sea; they present a rugged and precipitous appearance, and are nearly all densely wooded from the base to the summit; from June to October during the S. W. monsoon, they are generally completely enveloped by thick clouds. Their sides are clothed with teak and other large trees, and also with bamboos, underwood, and high grass, which, preventing the free circulation of air, tends to make them very unhealthy; so extremely noxious are they at times considered, that all who possibly can, quit their neighbourhood, and only return to them on the setting in of the S. W. monsoon, about the beginning of June, when they become nearly if not quite free from fever. Though the miasm appears to be more concentrated in the vicinity of the hills, still it is not safe during the unhealthy season, to venture into any part of the jungle which approaches to

within a few miles of Trevandrum. The teak which is of an excellent description, and in great abundance in Travancore, is floated to the coast by the streams, issuing from different parts of the mountain range.

Passes. The passes through the hills are two; the Arambooly to the south, is considered perfectly safe at all seasons of the year, but the other the Arungoll pass, about seventy miles further north, can only be traversed during the rains, from June to December, without incurring great hazard of contracting fever. At that season of the year it affords the readiest access from Madura, and the places to the northward, but generally speaking the Arambooly pass is much more frequented. Courtallum, on the Tinnevelly side of the hills, lies near the Arungoll pass, and owes its cool climate to the constant current of air rushing through it from the western coast.

Climate. Trevandrum is generally considered healthy; the great quantity of rain which falls throughout the year, and its proximity to the sea, tend to make it cool, and at no season does the thermometer ever attain a height at all approaching to what it sometimes does in the Carnatic, seldom rising above 90° at the hottest time of the year. About the beginning of June the S. W. monsoon sets in, and continues till the end of September, during this period a great quantity of rain falls, and the thermometer seldom exceeds 75°. From October, the weather is sometimes rather close, until the setting in of the N. E. monsoon, early in November. The quantity of rain from this monsoon, though much less than from the other, assists greatly in cooling the atmosphere, and in the interval, or during March April and May, the weather is warmest, and at the same time most unhealthy. In December, January and February, the nights are cool, and the dews are heavy, exposure to which is apt to induce fever. Though the climate on the whole may be considered healthy, it is not equally favorable to all constitutions, and in rheumatic cases, or

where there exists a predisposition to pulmonary disease, the damp state of the atmosphere proves injurious.

Soil. The soil about Trevandrum varies considerably, being light and gravelly on the hills, whilst in the valleys it is a deep black mould, formed by the decomposition of vegetable matter and alluvia, brought down by the heavy rains from the hills.

Vegetable productions. The vegetable productions are numerous, and in favourable seasons supplies of all kinds are abundant, rice is cultivated in the valleys, in sufficient quantity to meet the wants of the country, and at times to admit of exportation to a considerable extent; dry grain is not much used, and therefore but little is grown.

The trees most commonly seen in the vicinity are the jack, cocoanut, palmyra and areca; the sago palm appears also to grow very well in this climate, and on the northern part of the coast good sago has been prepared; pepper and cardamoms, the great sources of revenue to the Travancore government, grow abundantly, the former all over the country, the latter principally near the base, and on the sides of the mountains; cinnamon and nutmegs are cultivated in gardens in the neighbourhood of the hills, where they are found to thrive exceedingly well; the importation of tobacco is a monopoly in the hands of the Travancore government, and the heavy tax of 500 per cent, imposed on it, greatly limits its consumption, which is almost entirely confined to chewing. Trials were formerly made to introduce the culture of it into the country, but without success, and it appears probable that the failure may have arisen from the ground not having been selected with sufficient attention to locality and soil. At Trevandrum and generally throughout Travancore, the climate seems to be a great deal too moist for tobacco, but more southerly this objection does not exist, and in an experiment recently made, ten or twelve miles north of Cape Comorin, it has been shewn, that the

plant thrives exceedingly well. The tobacco produced from Jaffnapatam and Tinnevelly seed, was pronounced to be quite as good as any imported, and as the saving effected would be very considerable, it is in contemplation to attempt its cultivation in the south of Travancore, on a sufficiently extensive scale, to render the country independent of foreign supplies.

The mulberry grows very well, and the Travancore government are forming plantations, for the purpose of producing silk on an extensive scale. A number of mulberry plants of the best kinds, have been received from the horticultural society at Bombay, and cuttings from them have been distributed as much as possible, with every encouragement to the people to cultivate them. Coffee is at present produced but in trifling quantity, considering the advantages which the country possesses, the climate and soil being considered very favorable to its growth, and the shelter which it requires, being abundantly afforded by trees in every direction; the government are at present directing the attention of the people as much as possible to its cultivation, and with this view they are procuring supplies of seed from different sources for distribution, and issuing the necessary directions for its management. The plant is very profitable when it once begins to bear, which it does about the third year, and as the trouble and expense incurred previous to that time, is inconsiderable, it is to be hoped the culture of it will become general. At present, the market is supplied by a few private individuals.

A great many esculent roots are cultivated by the natives, and with care European vegetables are found to grow well. Fruits in general are not so good as on the other side of the ghauts; grapes seldom arrive at perfection, but the plantain and pine-apple are in great abundance, the latter at times being very plentiful in the bazaars, and at a price sufficiently low to place it within the reach of all classes.

Mineral production. Of the mineral productions of the country, one of the most useful is laterite, which is very plentiful in the neighbourhood, and extensively employed in building. It is found near the surface, and being in a soft state, is dug out with a sort of hatchet, and cut into any shape required, subsequent exposure to the atmosphere imparting the necessary degree of hardness; some quarries yield it of a better quality than others, depending on a greater quantity of iron entering into its composition. The roads in the vicinity have been made of it, and are found to be good and durable; granite is also abundant, and forms a great part of the range of ghauts, and the rocky hills in the neighbourhood. For some time past, boring operations have been carrying on, in different parts of the country, with a view to discover coal, but hitherto without meeting any indication of its presence, and the geological formation renders it improbable that the experiment will be successful.

Animals. The animals met with in Travancore, are much the same as in the other jungly and hilly parts of India; amongst the larger kinds are the elephant, tiger, bison and elk; and the list of smaller tribes, differs but little from that on the eastern side of the ghauts—hares, pea-fowl, jungle-fowl and spur-fowl are common, but neither the fox, nor the partridge are ever found on this coast, the climate of which, it would appear, is too damp for them; the black-cheetah, an animal said to be but rarely met with in the south of India, inhabits some parts of Travancore, the colour of its skin is a deep black, but when viewed in a strong light, spots are distinctly visible on it; in size it is somewhat less than the common cheetah, but in disposition more ferocious than the other varieties of this family.

Agriculture. Two crops of paddy are annually obtained in the valleys, and in favorable years an additional one of gram, but nearly all the elevated ground has been allowed to lie waste, and become overgrown with shrubs and low jungle.

The land seems in most places well adapted for dry grains, and would soon repay the labour and expense of bringing it under cultivation.

Reservoirs of water for agricultural purposes, when compared with the wants of the country, are few and insufficient. In most parts, the ryots chiefly depend on the periodical rains, and the supply obtained in this way in general suffices, but when it fails, scarcity and much misery necessarily follow. With the view to improve the irrigation of the country, an officer of Engineers was employed a few years ago in constructing tanks, and opening canals for diverting water from the rivers, into other channels.

Means of communication.

The communication between different parts of Travancore is much facilitated by canals, and back-waters. A canal runs, with an interruption of five or six miles, to Quilon, by means of which intercourse with that place is carried on. An obstruction is formed in its course, by a low range of hills running from some distance inland towards the sea, and which it was proposed lately to cut through, but the estimated expense was so great, that the scheme was in consequence abandoned; circumstances have however since occurred, to render it desirable that it should be opened, and the subject is at present under consideration, with a prospect of its being proceeded with; were it completed, the convenience to the people would be great, as it now forms the only impediment to a line of water carriage betwixt Trevandrum and Trichoor, a distance of 200 miles.

The road into the Tinnevelly district, through the Arambooly pass, is in a tolerable state of repair, and so also is the northern road leading to Quilon.

Population.

By a census taken in 1820 and 21, the number of inhabitants in the Travancore country amounted to 900,000, a subsequent estimate in 1836, makes it 1,300,000, giving an increase of four hundred thousand in fifteen years.

This population is scattered over a country containing 8,000 square miles, but in very unequal proportions, as some parts chiefly near the sea coast, are much more densely peopled than the hills, and the forest tracts in their neighbourhood, where the inhabitants are but sparingly distributed.

The population is composedof hindoos, mahomedans, and christians, varying in number in different districts.

Hindoos. Brahmins are very numerous, consisting of settlers from neighbouring countries, as well as the aborigines of this part of the coast, called namboories; the latter are the finest looking race, and rank first in the estimation of the people, over whom they exercise an influence, even greater than is common in other parts of India.

The most numerous, as well as most useful part of the population, are the nairs, who belong to the Sudra tribe, and are separated into a number of different classes, employed in various occupations: from amongst them are selected the Rajah's troops.

The Shanars who rank very low in the scale of caste, form a numerous body in the south of Travancore, and are chiefly employed in agricultural and other laborious pursuits.

Mahomedans. Thé mahomedans are nearly all mapulays, or * lubbays, the descendants of Arabs, who have been long settled in the country. They have now become a numerous body, and engage more in commercial than agricultural pursuits. There are some other musselmaun settlers, the descendants of sepoys, in the employ of former Rajahs; but the Mahomedan rule never having been established in Travancore, they are not numerous, and appear to keep themselves quite distinct from the mapulays.

Christians. The christians in Travancore, consisting of protes-

* The offspring of Arab or Mahomedan fathers, by Hindoo mothers, are so called.

tants, roman catholics, and syrians, comprise a considerable part of the population of the country.

The population of the Trevandrum district, according to the census of 1836, was 57,012; while in 1820, it was 43,583; part of this extraordinary increase is probably only apparent, for it is well known with what great difficulty a correct census is obtained, even under the most favorable circumstances. For a variety of statistical facts, relating to the former census, and other subjects, reference may be made to the tables Nos. 1, and 2 annexed, which were constructed by Captain Ward during his survey of the district.

About 5,000 of the inhabitants reside within the fort of Trevandrum, and the remainder outside the walls, and in the neighbouring villages.

Dwellings. The dwelling houses are generally speaking clean and comfortable, those of the better classes have much wood in their structure, and are usually elevated a few feet from the ground.

Diet. Such of the nair tribe as can afford it, use animal food, but for the most part, their diet consists of rice and vegetables, made into stews or curries. A common article in use is the jack fruit, which is considered very wholesome, and is consumed in great quantities, both in its ripe and unripe state; the seeds are also converted into cakes. A tuberous root resembling the yam is likewise much used.

Living on the whole is cheap in Travancore, eleven or twelve rupees a month being sufficient for the expences of a respectable nair family, but a smaller sum often provides for all their wants.

Some of the lower classes are much addicted to the use of intoxicating liquors, and the great number of trees in the neighbourhood yielding toddy, enables them to indulge this

habit at a very trifling expense. Intemperance does not however appear to have spread much amongst the better orders.

Dress. The usual dress is in general extremely light, that of the Nairs consists merely of a cloth wrapped round the loins, made of a material thinner than that which is in common use by the natives of other parts of the Presidency; a piece of gauze or thin cloth, thrown loosely over the head, is used as a substitute for the turban, and affords but little protection against the rays of the sun, but when required, the umbrella or palmyra chattah, with which people rarely go unprovided on this coast, answers all the purposes of a thicker head dress.

Employments. The great bulk of the population, consists of agriculturalists, artizans, and fishermen. About 2000 Nairs are employed in the military service of the Rajah.

The inhabitants of all classes are very much attached to their country, and they can seldom be induced to quit it by any advantages held out to them.

Crime. Crimes are not very frequent, and those which do occur, are not often of an aggravated kind. Thefts of a daring character are seldom committed, and offences of the more grave form are usually confined to the Mapulays.

Customs, &c. The natives of Travancore are strong and active; the Nairs in particular, are a good looking robust race, and in the greater number of instances fairer than the people of India usually are; in their habits they are commonly quiet and orderly, but in many respects their morals are very depraved, and their marriages, if such a name can be given to their alliances, are of so loose a nature as to allow an almost unrestrained intercourse between the sexes, the natural consequence of which is, an unusual prevalence of venereal disease. The number of objects met with in the streets, as well as those who apply for assistance, with this disease in its worst forms, sufficiently evince the extent to which it prevails.

Education. Education to a certain extent is general, the middle classes are usually able to read and write their own language, and in the better ranks, a knowledge of English is not at all rare; the means of acquiring other branches of education have lately been afforded, the Rajah having established a very excellent free school at Trevandrum, under the superintendence of a European master, and also auxiliary schools, with competent native teachers, in other parts of the country.

Poor. In Trevandrum, the proportion of poor is unusually large, and although charitable institutions have been opened where rice is distributed gratuitously, still the number who have little more than sufficient to support life, is very great.

Diseases. Elephantiasis. The diseases met with, are in general much the same as in other districts, in the southern parts of India. There is however one, *Elephantiasis*, or as it is vulgarly called the *Cochin leg*, to which the natives of Travancore, in common with those of the greater part of the western coast, are very subject, and which must attract the attention of every person on first arrival; cases are constantly met with at this place, and along the northern part of the coast, and in the Cochin country it is still more frequent. The disease usually commences with severe pain and swelling in the limb, attended by fever, which symptoms generally subside in a few days, but return for some time at uncertain intervals, whilst the extremity continues to increase on each attack, until it attains in most instances an enormous size. The pain which attends the early stage of the disease usually abates after some time, and little or no inconvenience is felt, except from the great bulk of the limb; and the subject of it is able to pursue his ordinary occupation. In some cases the leg preserves a smooth appearance, but in others it becomes studded with large warty excrescences. The disease in this part of the country, is almost exclusively confined to the lower extremities, one or both of which may be attacked; and both sexes are equally the subjects

of it. The natives attribute this as they do almost every other complaint, to the peculiar quality of the water which they use, but meagre diet is doubtless a predisposing cause ; for although the richer natives are not exempt, it appears to be much more common amongst the poor. Europeans have rarely been known to suffer from elephantiasis. The natives consider the disease incurable, and attempt nothing for its relief. In obviating the fever and pain at the commencement, antimonials and evaporating lotions to the limb, are of some use, but medical treatment has generally been ineffectual, in preventing the progressive increase of the limb.*

The annexed Table of diseases, treated in the Rajah's Public Hospital, from its establisment in 1838, to 1842 inclusive, will give some idea of the state of disease, of the poorer inhabitants of this part of the country.

* The hydriodate of potassa ointment in the proportion of ʒi to ℥i of lard has been found useful in a case of Eliphantiasis occurring in a Sepoy of the Nair Brigade. The remedy was assiduously applied for about a month when the limb was reduced to nearly its natural size, although the disease had existed for two years. The improvement in this case, which was treated in 1842, has up to the last account been permanent. In addition to this remedy there is no doubt but much benefit would result from change of air and especially of water, but unfortunately the persons usually affected with Elephantiasis have not the means of resorting to change of climate.

TREVANDRUM PUBLIC HOSPITAL.

No. 7.—*Table exhibiting the number of admissions and deaths, from each Class of disease, for 5 years.*

CLASSES.	DISEASES.	1838. Admitted.	1838. Died.	1839. Admitted.	1839. Died.	1840. Admitted.	1840. Died.	1841. Admitted.	1841. Died	1842. Admitted.	1842. Died.	Years 1838 to 1842 inclusive. Ad.	Years 1838 to 1842 inclusive. Dd.	Ad.&Dd. from ea. class of disease. Ad.	Ad.&Dd. from ea. class of disease. Dd.	Average percentage of deaths to sick.
Fevers......	Febris ephemera	3	0	1	0	2	0	0	0	4	0	10	0	16	0	0
	,, intermit. quot.	2	0	0	0	1	0	2	0	1	0	6	0			
	Cholera.........	0	0	0	0	7	3	0	0	1	1	8	4	8	4	50 ·0
Diseases of the Abdominal viscera......	Diarrhœa.......	3	2	0	0	0	0	0	0	2	1	5	3	142	28	19 ·718
	Dysenteria acuta et chronica.	23	8	56	8	16	0	15	4	10	4	120	24			
	Colic...........	0	0	0	0	0	0	6	0	1	0	7	0			
	Obstipatio......	1	0	0	0	0	0	0	0	0	0	1	0			
	Dyspepsia.......	2	0	1	0	1	0	0	0	1	0	5	0			
	Hœmorrhois. ..	0	0	0	0	0	0	1	0	1	0	2	0			
	Spasmus........	0	0	0	0	0	0	0	0	2	1	2	1			
Diseases of the Lungs and Heart.	Catarrhus......	2	0	0	0	3	0	4	0	1	0	10	0	14	2	14 ·285
	Phthisis pulmonalis...	1	1	0	0	0	0	0	0	1	1	2	2			
	Pneumonia.	0	0	0	0	0	0	0	0	2	0	2	0			
Do. Brain..	Paralysis.	2	0	0	0	0	0	1	0	1	1	4	1	10	1	10 ·0
	Amentia.	0	0	0	0	0	0	0	0	2	0	2	0			
	Cephalalgia.. ..	0	0	0	0	0	0	0	0	4	0	4	0			
Diseases of the Eye ..	Ophthalmia.. ..	0	0	17	0	5	0	4	0	0	0	26	0	26	0	0
Eruptive fevers.....	Variola.........	0	0	0	0	0	0	6	1	26	8	32	9	34	9	26 ·470
	Varicella........	0	0	0	0	0	0	0	0	1	0	1	0			
	Erysipelas......	0	0	0	0	0	0	0	0	1	0	1	0			
Dropsies...	Anasarca.... ..	0	0	0	0	0	0	0	0	3	0	3	0	116	27	23 ·275
	Ascites...... ..	7	2	49	11	21	0	29	10	7	4	113	27			
Rheumatic affections.	Rheumat. acut. chronicus	38	1	124	3	35	0	33	4	15	1	245	9	245	9	3 ·673
Venereal affections..	Syphilis Primitiva..........	25	0	54	1	18	0	30	0	25	0	152	1	237	4	1 ·687
	,, consecutiva.	1	0	0	0	0	0	3	0	9	1	13	1			
	Bubo....	8	1	9	0	8	0	9	0	19	0	53	1			
	Gonorrhœa	3	1	5	0	0	0	3	0	8	0	19	1			
Specific diseases.....	Lepra..	0	0	1	0	3	0	2	0	1	0	7	0	76	1	1 ·315
	Scrophula......	0	0	0	0	0	0	1	0	5	0	6	0			
	Dracunculus ...	2	0	0	0	0	0	0	0	0	0	2	0			
	Impetigo.	0	0	0	0	0	0	0	0	1	0	1	0			
	Atrophia.., ...	1	0	17	0	12	0	23	0	7	1	60	1			
	Wounds and Injuries.........	0	0	0	0	0	0	3	0	1	0	4	0	4	0	0
	Ulcers..........	164	5	295	3	225	6	184	2	86	5	954	21	954	21	2 ·201
	Other diseases,.	18	1	24	0	26	2	34	0	31	1	133	4	133	4	3 ·751
	Total....	306	22	653	26	383	11	393	21	280	30	2015	109	2015	109	5 ·409

Out Patients treated principally within the last 2 years——994.

Fever. Fevers, as has been before remarked, prevail very much at certain times, particularly amongst those who are exposed in the jungles. The inhabitants of Trevandrum suffer occasionally from fever during the dry season, but not to a very great extent, whilst the European residents and escort, appear to be but little subject to it. Both the intermittent and remittent forms are met with, the former generally yields to purgatives and antimonials, and its return is prevented by the use of an infusion of chereyta, or cinchona; but the remittent is often very intractable, requiring more active measures, and in the jungles where it is impossible to procure proper aid, a great many are supposed to be annually carried off by this disease. The people employed to collect cardamoms, and in felling teak timber, and who are often required to be in the neighbourhood of the hills, during the unhealthy season, suffer much. In persons who have experienced repeated attacks, organic disease is of course very general, and dropsies are often met with in debilitated subjects.

Cholera. Cholera some years ago visited the country, and carried off great numbers of the inhabitants; but only occasional or sporadic cases, have since been met with.

Bowel complaints. Diarrhœa and dysentery, both in the acute and chronic forms, not unfrequently occur during the rainy season, and are sometimes severe, requiring local bleeding, blisters, with the use of calomel or blue pill, and ipecacuanha, in their treatment.

Pulmonary complaints. Pulmonary complaints are not uncommon, and well marked cases of phthisis are sometimes seen.

Small pox and vaccination. Sporadic cases of small pox are met with, but the disease is kept in check as much as possible, by the large vaccination establishment, supported by H. H. the Rajah in Trevandrum, and throughout Travancore.

Rheumatism. Rheumatism is very common, and during the rainy season it often obstinately resists every mode of treatment that can be devised. Purgatives, with alterative and diaphoretic medicines, rubefacient liniments and blisters, form the ordinary remedies.

Venereal. It will be seen by reference to the table, that venereal diseases are exceedingly prevalent on this coast, where it is found to exist in its most virulent form; secondary symptoms exhibiting scaly, papular, pustular and tubercular eruptions, ulceration sometimes destroying the tonsils, velum and uvula, and extending to the nares, and larynx, are by no means unfrequent; and several cases have presented themselves at the hospital, where on looking into the mouth, there appeared a vast ulcerated cavity involving the palate and lower part of the pharnyx.

The treatment adopted both in the primary, and consecutive forms, has been in many instances, a mild alterative course of plummer's pill, *never given with a view to affect the system*, as the greatest dependence was always placed on the compound decoction of sarza, in combination with the iodide of potassium, about a pint of the former with two or three grains of the latter taken in divided doses, during the day, and continued until the sores healed. In cases where buboes formed, previous to admission, the hydriodate of potassa ointment was freely applied over and around the enlarged glands, provided no fluctuation could be detected, and in general with great benefit; but in those cases where suppuration, or extensive destruction of the parts had taken place, and sinuses formed, the plan adopted has been the free application of the iodide of potassium solution, ℈ij to ℥j of water, to the ulcerated surface, the sinuses being injected with the same, this was also used to sores on the penis, particularly if presenting an unhealthy appearance. In many cases the cartilages and bones of the nose had been destroyed previous to admission, but even in this stage of the disease, and in one or two instances where the entire nose, and part of the upper jaw had been destroyed, the disease was completely arrested by this application, along with

the decoction, and the iodide of potassium internally. Two sketches of cases treated in this manner with success are here given.

Leprosy. This disease is very prevalent particularly amongst the lower orders, nor are the higher classes exempt from it, and it is generally believed to be both hereditary, and contagious ; there is however no doubt but its prevalence, is greatly to be attributed to poor diet, and inattention to cleanliness.

Scrophula. Several very inveterate cases of this formidable and troublesome disease, came under treatment, in most instances affecting the glands of the neck, and throat, and occasionally those in the axilla. The treatment consisted in the exhibition of the compound decoction of sarza, about a pint daily, with two or three grains of the iodide of potassium, the tumours being freely touched with the compound tincture of iodine morning and evening ; besides which, the ointment of the iodide of potassium (ʒj to ℥j) has been kept constantly applied to them. When suppuration commenced, and the sores appeared foul, with a tenacious pale slough adhering to them, its separation has been accelerated by the free application of lunar caustic, afterwards the iodide of potassium solution, of the strength of ℈ij to ℥j. of water, is found to heal the sores and sinuses readily.

Malabar Itch. Psora is also very general and frequently assumes a virulent, and obstinate form, and indeed well merits its appellation of "*the Malabar* ;" it is no doubt occasioned by the poorer classes subsisting so much on fish, which is often from partial decomposition unfit for food, and the effluvia from which on passing the market places, is sometimes almost intolerable.

The most effectual treatment in this disease is the local application of sulphur and mercurial ointments, in the proportion ℥j of the former, to ʒj of the latter, sulphur and cream of tartar electuary being at the same time given internally, in the more obstinate and chronic cases.

Ulcers.

The extreme prevalence of ulcers of various characters, on this coast, is proverbial, and it would be difficult to form any classification of them, suffice it to say, that amongst them leprous, and venereal sores, are conspicuous, as well also as those of a phagedenic, and sloughing character; many of these cases have been traced to repeated attacks of lues venerea, and in the greater number, the constitutional treatment has consequently been the same, as that adopted in secondary syphilis. In sores of a leprous character, the usual application is an ointment composed of the hydrarg: nitrico oxydum ʒj, to ℥j of the ceratum resinæ, which cleanses and stimulates the sores much better than any other application, aided by a wash consisting of a solution of chloride of lime, of a strength adapted to the different cases. Frequently washing the sores with chloride of lime, tends materially to accelerate the cure, by destroying the acrimonious and corroding nature of the discharge, and preventing them from spreading.

Births, deaths.

No registers of births or deaths, have ever been kept in Travancore, and therefore no information on these subjects, on which any dependence can be placed, is procurable.

Climate unfavorable to Cattle.

The climate of Travancore is considered unfavorable to some kinds of cattle. The cows of the country are diminutive, and miserable looking animals, the quantity of milk which they yield is very small, and those brought from other parts of the country soon degenerate. The same is the case with regard to sheep, none are reared by the inhabitants in Travancore, and the supply required for the markets, is brought from the Tinnevelly and Coimbatore districts.

Horses, here as well as all along the western coast, are very liable to become weak in the loins, particularly if exposed to the wind, when much heated; castration is often resorted to as a preventive, and it seems to be generally admit-

ted, that geldings suffer less frequently than entire horses; when attacked with this complaint the animal is rendered completely useless.

Hospitals. The only hospitals at present in Trevandrum, are one for the sick of the Nair brigade, and another for the reception of the sick poor. The latter is divided into four wards, two of which are appropriated for patients of the higher castes, and the others for persons of low caste; the building is calculated to contain altogether about seventy-five patients, who are dieted at the expense of the Travancore government.

Barracks, The barracks, are situated about a mile and a quarter to the north of the fort, on high, dry and airy ground, they are sufficiently extensive to accommodate a native regiment, and a company of artillery; but since the force was withdrawn some years ago, they have remained unoccupied, they however still continue to be kept in good repair.

No. 1.—*Statistical Table for the Trevandrum District.*

TREVANDRUM, DISTRICT.	Villages.	Area of the district.	Estimated extent under paddy cultivation.	Population to the square mile.	Number of Houses.	Number of Porayeddums or Gardens.	Cocoanut, Areka and Jack trees, &c. under Revenue to Government.	Kullaul or Arrack and Toddy Shops, &c.	Ploughs, spades. &c. agricultural Implements.	Bullocks, Cows and Buffaloes.	Reservoirs and Wells.	Religious buildings of all description.	Public buildings, Vyeumbalum, Oottapurrans, Chowkies, &c. &c.	Palmyra Trees.
Southern Division.														
Nelmun Adigaroon	8				3404		117,054	93	301	2090	285	40	19	
Puttom	4				599		29,697	30	235	1313	246	20	2	
Ooloor	4				757		58,600	22	745	1397	228	39	6	
Colatoor	8				795		64.801	23	736	1161	81	39	2	
Pulleapooram	7				668		57,903	25	628	1444	103	51	13	
Total	31	99¼ square miles.	11⅓ square miles.	4,402	6223	10,383	3,28,055	193	3348	7405	943	189	42	9168
Northern Division.														
Vunjeoor Adigaroon	9				1692		118,282	63	1093	633	155	24	25	
Paucolam	6				759		83,920	65	729	693	454	30	0	
Vutteoor Kaou	7				957		63,182	15	804	2174	52	29	6	
Callecoottum	4				1059		37,424	0	440	730	251	18	4	
Thoneycull	4				1202		64,217	9	555	1272	303	19	4	
Total	33				5679	9184	367,025	152	3621	5302	1215	120	39	8094

No. 2.—*Table shewing the population of the Trevandrum District.*

TREVANDRUM, DISTRICT.	Brahmins of various castes, and chetties included.	Umblawassy or different caste of Varior, Maroyen, Pesharodee, &c. connected with the religious establishment.	Nairs, including all denominations.	Different classes of Washermen, Weavers, Barbers, Potters, &c.	Konganees, Puppadachetties and Koodoomecarras, &c.	Various castes of Tamil from the Eastern coast.	Various castes of artificers, Smiths, Carpenters, &c.	Musselmen, Jonah's Mapullays, &c. &c.	Christians of every description.	Eelavars or as they are indifferently, Shovans, Teans in which class is comprised the whole of the lower order.	Pooliars, Parriars or the different classes of predial slaves.	Total number of castes	Total of Males.	Total of Females.	Total population.
Southern Division.															
Nelmun Adigaroon	3249	86	1988	292	41	612	224	1066	568	1161	709	53	5220	4776	9996
Puttum	46	35	1263	217	0	57	192	3	0	385	625	37	1420	1403	2823
Ooloor	116	67	1572	64	0	261	201	74	0	914	569	42	1916	1925	3841
Collatoor	20	17	1250	108	0	53	133	209	1122	676	481	30	2078	1967	4045
Pulleapooram	64	76	1064	67	0	238	149	967	0	672	580	36	1983	1917	3900
Total	3495	281	7137	748	41	1221	902	2319	1690	3808	2964	198	12,617	11,988	24,605
Northern Division.															
Vunjeoor Adigaroon	921	200	2298	192	0	873	287	119	0	406	284	43	2919	2661	5580
Paucolam	98	41	1204	96	0	213	67	31	276	819	391	29	1594	1642	3236
Vutteoor Kaou	18	216	1785	42	0	287	279	84	0	661	1001	36	2464	1909	4373
Callecootum	168	120	1131	38	0	67	76	185	27	391	327	34	1280	1250	2530
Thoneycull	60	112	997	16	0	71	150	584	51	616	602	31	1601	1658	3259
Total	1265	689	7415	384	0	1511	859	1003	354	2893	2605	173	9858	9120	18,978

Note.—The following is the result of the census of 1836.

Male Adults	19,631	
„ Children	9,374	
		29,005
Female Adults	20,386	
„ Children	7,621	
		28,007
	Total	57,012

Account of a recent attempt to explore the Travancore Mountains.

The high range of hills in the vicinity of Trevandrum, never having been thoroughly explored,—although unsuccessfully attempted many years ago, by captain Sheridan of the Nair brigade, lieutenant Noble, and captain Green of the Engineers,—the Resident of Travancore accompanied by several gentlemen, started from Trevandrum on the 24th of February last, via Arienaad to visit these hills; the road as far as Arienaad distant 16 miles, was found very tolerable, frequently traversing considerable tracts of paddy ground, and steep ridges covered with jungles; halting here during the 25th and 26th, the next march was to a place called Caviatten Coodul, eight miles nearer to the base of the hills, through a very picturesque undulating jungly country, by an old tract laid down on the map, passing over several elevated ridges, but upon the whole the road was found tolerably good.

Here the party encamped for two days, on the banks of a branch of the Kurramonay river, at an elevation of 430 feet above the sea, while parties were sent to explore the country towards the hills. From thence they started after breakfast, on the 1st March, and pursued their course through beautiful forests, and over some ridges, until they came to a small river at the foot of the hills, called the Attyaur, 1,230 feet above the level of the sea, and after a short halt, commenced ascending the hill through a dense, and almost impenetrable forest of magnificent trees, which afforded a complete shade from the rays of the sun, rendering it cool and pleasant; otherwise it would have been an arduous undertaking in the heat of the day, from the steepness of the ascent, leading directly up the acclivity of the mountain, as native roads usually do.

After ascending the first ridge, a kind of promontory or projection of rock, where there appeared the remains of an old barrier was seen, from which there is a splendid view of the country below; a little higher up, there is a plateau of some extent, covered with noble forest trees, and pursuing

the route over another ridge, a dense low jungle was entered apparently the abode of elephants, and innumerable other wild animals, whose foot prints were observable in every direction.

The party next shaped their course to the right, over very rough ground, until they attained an altitude of 3,980 feet, where an encampment was formed about 3 P. M., by the side of a small rivulet, there being no prospect of gaining the summit that day, the line leading to the top of the range not having been cleared or explored.

The encampment here presented a very lively scene, from the number of people employed constructing temporary huts, and the bustle and confusion, which prevailed.

The natives very soon began to shiver from the change of temperature, although to Europeans it felt delightful. The splendid view of the Augastier peak, towering far above, a little to the south, occasionally capped with clouds, and again bursting forth during gleams of sunshine, was truly sublime. The enjoyment also of the cool delicious water, was a source of much gratification after the fatigues of the day, which however were felt but slightly from the coolness of the temperature, and exhilirating atmosphere, as compared with the heat of the encampment below, where the thermometer stood at 90°.

Towards evening, great piles of wood were collected, in different directions all round the encampment, and set fire to, as well to frighten away elephants and tigers, as to afford warmth to the natives.

The European gentlemen who slept on mattresses on the ground, in a small tent, found it rather cold during the night, and in the morning on looking at the thermometer, it stood at 65° Fahr. All complained of being unable to sleep for a great part of the night, perhaps from the cold, but more probably from the effects of the rarefied air.

It was found in the morning, that all the coolies had run

away just before day light, although they were amply supplied with rice, and every attention had been paid to their wants. But the dread of wild animals, and especially of venturing into elevated or unexplored regions, felt by them, is such, that it is difficult to induce them either by fair means or force, to accompany such expeditions; and in consequence of this *contre temps*, the encampment was necessarily obliged to stand fast; however, after breakfast on the 2d March, the party proceeded towards the summit of the ridge, which after many difficulties, and having had almost literally to cut their way, the whole distance of about two miles, they at last emerged from the jungle, and ascended its highest point.

The extensive view of the Travancore country, which presented itself, with the sea in the distance, as well as that looking towards Palpanassum, on the Tinnevelly or east side of the hills, was truly magnificent. Here a considerable plateau of table land exists, at an elevation of 4,740 feet, as measured by the barometer. The highest peak of the range was estimated at about 6,000, and the Augastier peak, a little further to the southward, at about 7,000 feet, which is nearly as high as Ootacamund, and no doubt posseses a similar climate---several other high peaks, appeared at various distances, both to the north and south. On exploring the table land in various directions, the whole surface was literally trampled by elephants, seemingly from its being a place of retreat for them, from the jungles below; and in some of the small sholas, or open clumps of jungle, the prints of tigers were seen.

The surface of the table land was generally rocky, although considerable portions of sward were seen here and there, but time did not admit of exploring further.

It is in contemplation shortly to make another excursion to these hills, when it is hoped more extensive discoverics will be the result.

The benefit of having such a climate, within so convenient a distance must be apparent, and possibly a sanatarium may be established on the Travancore hills, possessing advantages, nearly if not equal to those of the Neilgherries.

COCHIN.

Situation boundaries, &c.

Cochin, one of the oldest of the Dutch settlements in India, is a maritime district in the province of Travancore, lying between the 9th and 10th degrees of east longitude; it is bounded by the ocean on the west; the province of Malabar on the north; by the range of mountains commonly called the western ghauts, on the east; and Travancore proper on the south.

Town of Cochin.

The town of Cochin itself, while in possession of the Dutch, was surrounded by a rampart, ditch and other works, rendering it a place of security, for the extensive commerce which they carried on, in this part of the country. The fortifications however, after its surrender to the English, were dismantled, and nothing now remains to point out their situation, further than the mound of earth, the remnant of the old rampart, which surrounds it on the land side, and is now a disadvantage, from in some degree preventing free ventilation.

Most of the streets of Cochin run in a south-westerly direction, and the houses which were built at a subsequent period by the Portuguese, are mostly two stories in height, and though of large dimensions, still from the internal arrangement, and the manner in which they are crowded together, they are not very well adapted for a warm climate; and the small enclosures in the rear of each, surrounded by walls of from 14 to 16 feet in height, prevent a due circulation of air.

Backwater.

There are no rivers of importance in the district, but the backwater from its great extent, the fertility which it diffuses over the country, and the facility of communication which it affords, is deserving of particular notice, being to Cochin, what roads are to other countries. Taking the

town of Cochin, as a starting point, the back-water may be described as branching to the southward and northward, extending in the former direction nearly to Quilon, and in the latter as far as Chetwa, a distance of about 40 miles ; in its course it subdivides into numerous branches, which ramify in an easterly direction, and to the westward it communicates by three estuaries with the sea, viz. at Chetwa, Cranganore and Cochin. It is very shallow in many places, more particularly in the northern part of the Chetwa branch, but between the inlets at Cochin and Cranganore, and the former place and Alleppy, situated about 30 miles to the southward, it is at all times navigable both for passage and cargo boats; from Alleppy however, to the bar of Ivica near Quilon, it becomes gradually shallower. During the rains every part is navigable, flat bottomed boats being employed, but for the conveyance of small merchandize, canoes drawing but little water are preferred. The back-water is affected by the tides, which rise about two feet, and flow at the rate of 2½ miles an hour; it is tortuous in its course, and somewhat sluggish, but affords to the merchant a safe, and convenient means of transport for his goods, to the marts of Cochin and Alleppy, as also to the cultivator, of carrying his produce without much trouble or expense to the best market; another very important advantage is, that the communication is open at all seasons of the year. The cargo boats are covered with mats, made either of bamboo or cadjans, by which the goods, are protected both from the effects of the sun and rain.

There is a succession of hills and valleys, throughout the greater part of the district, the hills are generally covered with a low thick prickly shrub, and the valleys laid out in rice cultivation, and plantations of cocoanut trees.

Climate. The weather is more variable at Cochin than on the eastern coast, or in the interior of the country. The sea breeze, which blows during the day, is generally from the

westward, changing at times to the N. W. and S. W. The land wind from the N. E, which sets in at night, passes over so extensive a surface of water before reaching this place, that it is changed from a hot and parching, to a cool and sometimes chilly breeze, a free exposure to which during sleep is attended with danger. The south-west monsoon or wet season, begins about the end of May, and continues to the end of September, during which time the pluviometer gives an average fall of 72 inches of rain, and the thermometer indicates an average temperature of 78° ; the remaining months constitute the dry season, during which the thermometric average is about 85°. The climate is at all times more or less moist, and occasionally very sultry, but frequent showers of rain reduce the temperature, and prevent it becoming at any time very hot or arid; a continued drought is almost unknown, and the people are never subjected to the miseries of scarcity, or famine. On the whole, the climate although relaxing, and never so cool or bracing as in other parts of India, especially in the morning, possesses the advantage of being more equable in temperature throughout the year.

Soil. The soil varies considerably. To the north it is gravelly, in many places clayey, and strata of laterite abound ; southward it is sandy, but immediately on the banks of the back-water, there is an alluvial deposit, from the annual overflowings—occasioned by the heavy rains near the sources of the rivers, and which occur once or twice during the S. W. monsoon, completely inundating the villages on their banks. The effects on the paddy crops, are either beneficial or the reverse, according to circumstances ; if the seed has been but lately sown, or if the plants are very young, considerable injury is caused, the crop being liable to fail altogether.

Malaria. Disagreeable exhalations arise from the banks of the back-water, and are more particularly perceptible, during the dry season ; it has been however found, that the health of the inhabitants does not suffer in any marked degree

thereby,* and the people are as healthy looking, as those who live in drier parts of the district—the miasm being probably counteracted in some degree, by the purifying effects of the sea breeze.

Vegetable productions.

The vegetable productions of the country are the plantain, breadfruit, jackfruit, mango, pineapple, tamarind, guava, lime, citron, water-melon and pumpkin—among roots the yam, sweet potatoe, and the arrow root—the articles of merchandize, which are exported to various foreign marts are principally pepper, and cardamoms (both of which are monopolies of the Circar, or Rajah of Cochin,) also ginger, turmeric, cassia, betel nut, nux vomica and coculus indicus,

Among trees the teak stands pre-eminent, but there are also other valuable forest trees, as the angely, jack-tree, blackwood, ben-teak and bastard cedar. The Malabar teak is well known for its superiority both as regards its specific gravity, and closeness of grain. The angely is generally used in the construction of houses, and small vessels; it is by no means so durable as teak, but is preferred on account of its cheapness; a species of fir, known by the name of "Viney" is also valuable for the resinous juice which it yields, and which is substituted for varnish—the above trees, grow chiefly in the northern parts of the province viz., in the Talloopilly, Chittoor and Trichore districts; the cocoanut flourishes most luxuriantly in the southern parts, it delights in a sandy soil, and thrives in proportion to its proximity to the sea coast, requiring little or no culture.

Domestic animals.

The cattle are very diminutive, cows afford but a scanty supply of milk, and bullocks are almost useless for carriage or agriculture,—buffaloes however thrive well, and are used for the purposes of labour; sheep introduced from the neighbouring zillahs fall off very quickly, but pigs and poultry are abundant.

* Also remarked of the district of Quilon.

Manufactures. The manufactures of the district are chiefly arrack, cocoanut oil, coir and jaggery; sugar cane is not cultivated to any great extent, although the country offers every facility for its growth, and it might be turned to the greatest advantage. The mode of manufacturing sugar is little known to the natives of this part of the coast.

Agricultural produce. Cotton is grown in small quantities, and is of an inferior quality to that produced in Tinnevelly, on the eastern side of the ghauts.

Coffee of excellent quality, has also been partially cultivated; the resources of the province are indeed great, and only require capital with a spirit of enterprize to develope them, and turn them to advantage.

The attention of the natives in general is directed to the cultivation of paddy, no arable lands being allowed to lie waste; the supply of rice frequently exceeds the demand of the market, the surplus being shipped to Colombo, and other places; and besides rice, a grain called " chama" is largely produced. The paddy fields on the banks of the back-water yield but one crop annually, but in other parts of the country, as at Trichoor, and throughout the northern districts, two and in some parts of the Talloopilly district, even three crops are annually produced. The principal one however in all the districts, is grown during the S. W. monsoon, the sowing time being the months of May or June, according to the locality of the field; and the harvest is gathered in September or October. The second crop is sown, soon after the reaping of the first, and is by no means so plentiful as that in October, it is gathered in January and February. The abundance of the harvest depends, entirely on the supply of rain, for the agriculturist here, does not possess the means of artificial irrigation. The mode of culture is regulated by local circumstances; buffaloes are chiefly used in the tillage of the ground, when the nature of the soil admits of it, but in many parts of the country, it is entirely performed by

manual labour; the implements of agriculture are of the most rudeand imperfect kind, that in use for turning up the soil, being but a sorry representative of a plough—the sickle however, resembles that commonly used in Europe, though of smaller size.

Vast tracts of the higher lands are lying waste, from the apathy and indolence of the natives, and their unwillingness to engage in any branch of industry, that does not promise an immediate return.

Labour is very cheap—the daily hire of the free labourer varying from 2 to 4 annas, according to the nature of the work, but cultivators of the soil receive only one anna.

Roads. The means of communication being chiefly by water, there are consequently but few roads, the principal one runs along the coast from Alleppy, and those about Trichoor are particularly good, as the country abounds in laterite.

Population. The inhabitants residing outside the old fort, are chiefly native christians, while those occupying the town, are for the most part of Portuguese or Dutch extraction; with the exception of a few of the Dutch families, who either derive small pensions from government, or are possessed of private property, the great mass of the population of Cochin, from being in possession, at no very remote period, of considerable wealth, are now reduced to a state of great poverty. They are however generally cleanly in their persons, and about their dwellings, though not particularly industrious, nor anxious to quit the place with a view of improving their condition in life.

Castes. The prevailing castes throughout the country are *namboories* or brahmins, *nairs* or the military caste, *chagoweas*, artificers of all descriptions, *mooguas*, *kanakas* and *pellers*, constituting the hindoo portion, the remainder consists of *mapalays*, and christians of the following sects viz. roman catholics, romo-syrians and syrians.

A census of the population is annexed, and also a list of the different religious establishments and schools, see tables No. 1, and 2.

Namboories, or priests. The *namboories* or priests, who maintain an unbounded influence over the inferior castes, have an extraordinary custom with regard to marriage, which seems deserving of notice, inasmuch as it is opposed both to the brahminical law, and to the usage which prevails in every other part of India, viz. that of restricting the privilege of marriage to the eldest male member of the family.

Nairs. The *nairs* are of the soodra caste, and physically considered are a fine race of men; their most striking and obvious characteristic, is a cringing humility towards superiors, or in the presence of those by whom they hope to be benefitted, and a display of arrogance and tyranny, when these qualities can be exercised with impunity. The marriage ceremony amongst this caste, if marriage it can be called, is very simple, and consists merely of the bridegroom, in the presence of his friends and relations purposely assembled, presenting a cloth to the bride, and tieing a string round her neck; the engagement is as easily dissolved as formed, for on either party becoming dissatisfied with the other, they separate, and the relationship of husband and wife ceases from that moment, each being then at liberty to enter into a new engagement. The nairs are for the most part, either employed in the public offices of government, or in agricultural pursuits.

Chagoweas, and Kanakas. The chief occupation of the *chagoweas*, and the *kanakas* is that of gathering the fruit, and extracting toddy from cocoanut trees, and the *mooguas* are fishermen.

Pellers. The *pellers* are chiefly occupied in cultivation, they are slaves and in some instances fixtures, being only transferrable to another owner, with the land on which they

and their progenitors were born, but generally speaking they do not possess this privilege, but are saleable at the will or caprice of their owners.

Hill people.

Besides those above enumerated, there is a race of people inhabiting the mountains and jungles, called *hill people*; they are regarded with abhorrence and contempt, even by the pellers, who consider themselves defiled by coming in contact with them, these wretched out-casts from society, reside altogether in jungles, and rarely visit the villages, but are often seen by travellers on the road side; their appearance and gestures are scarcely human, and they subsist chiefly on fruits, roots and such animals as they can succeed in entrapping.

Christians.

The christians are engaged in various occupations, such as traders, agriculturists, fishermen, coolies, &c.; the same may be said of lubbays, except that they never become fishermen; the mahomedans who form but a very small portion of the community, are either peons in the service of government or of private individuals, or traders.

The amusements of the nairs, and other inhabitants of this country are so intimately connected with their religion, that it is difficult to draw any distinction between the one and the other for every amusement partakes of a religious character; they are by no means fond of manly or athletic exercises, preferring those of a sedentary nature; they practice games with cards, (the substitute for which is the ollak or leaf of the palm) and chess, in playing which the namboory brahmins pass half their existence.

Water.

From the proximity of Cochin to the sea, its low site, as well also as from the soil being composed entirely of loose sand, the ground on which the town stands, and that in its vicinity, is damp, water being found immediately below the surface; the water is brackish and considered unwholesome, it is however used by the lower orders, while the higher classes seldom employ it in any culinary opera-

tion. The supply of drinking water is brought by boats, kept up by government, from a river near the village of Alwye, 15 miles distant, this river takes its rise in the hill country to the north-east, and empties itself into the backwater a few miles above the town of Cochin. The water as it passes the village mentioned, is extremely pure, and the inhabitants of Cochin during the hot months, repair in great numbers to this place, for the purpose of bathing. The higher classes have a number of small comfortable bungalows on the bank of the river while the poor form a large encampment in the neighbourhood.

Food. Rice prepared in various ways, and vegetable curries, constitute the chief food of the namboories, who abstain from flesh and spirituous liquors; they use sugar, which is considered a luxury, largely and in various ways, and its consumption is only limited by their means. The nairs eat animal food, beef and pork excepted, and the chagoweas and mooguas only abstain from beef. Fish both fresh and salted, forms a principal part of the diet of the inhabitants residing on the coast, not however from choice but from cheapness. Spirituous liquors are indulged in by most castes.

The rich natives are often corpulent, which is perhaps attributable in some degree to the use of ghee, largely consumed by them with the view of attaining that enviable condition, by which it may be observed one native judges of the wealth, and respectability of another.

Clothing. A simple cloth worn round the waist, constitutes the only article of dress of the hindoos; the texture of this is usually sufficiently close, but on some occasions the namboories and nairs, substitute a fine transparent muslin, and are then as far as decency is concerned, in little better than a state of nudity—those who have intercourse with Europeans, wear an upper dress, and the lower castes are also more substantially clothed. The females are but very scantily covered,

and go with the bosom uncovered.

Habitations. The houses of the inhabitants are either built of brick and wood, or of leaves and mats, and contain several apartments, the style and materials varying according to the wealth of the owner.

The houses of the namboories and nairs, are kept particularly neat, while little attention is paid to cleanliness by the christians, or inferior hindoos.

Notwithstanding the fertility of the province, many of the inhabitants are destitute of the common necessaries of life, and have no means of procuring them, there being scarcely any field for industry, for however anxious they may be to labour, they can find but few who need their services. Rice-lands constitute the chief wealth of those parts of the province which are cultivated, the labour as before stated, being performed by slaves, the property of the landed proprietors ; the free-labourer is therefore chiefly employed in cooly work, such as conveying loads from one part of the country to another. There is no middle class here, the people being landed proprietors and renters of government lands, or slaves and coolies ; labourers are abundant, and wages low, and if the land now in an unproductive state was brought into cultivation, the change would necessarily be widely beneficial. The poor in the neighbourhood of the sea, are generally in better circumstances than those in the interior, from the trade there carried on offering a wider range of employment, such as in building yards, and in the manufacture of coir rope, oil, &c. The poverty of a great portion of the people, is increased by the habitual use of toddy and arrack, unfortunately so cheap and abundant as to be within the reach of all ; the native christians too, are much addicted to intemperance, and it is lamentable to see amongst them as well as others, its pernicious effects exemplified, by a cachectic appearance, and premature old age.

No tables of marriages, births, or deaths, are kept by the Cochin Circar.

Medicine and Surgery.

The professions of medicine and surgery are quite distinct; they are hereditary employments, and the most intelligent youths are selected for their study; the pupil usually receives as good an education as can be attained, of which a knowledge of Sanscrit for the former is indispensable, and his medical tuition commencing about the age of fifteen years, is carried on under the instruction both theoretical and practical, of his father. He is afterwards subjected to a public examination; their practice is timid and peurile.

Surgical operations are here much dreaded, and consequently but little practised, the namboory practitioners occasionally venture to bleed.

Town of Trichoor.

In the northern part of the district, and about 50 miles from Cochin, is situated the town of Trichoor, the second in importance, and which is much celebrated for its sanctity. The fortifications which formerly encompassed the town, have been destroyed, and it is now garrisoned by a company of the native regiment stationed at Paulghaut. It contains very excellent barracks, an hospital, store houses and a magazine.

The sepoys are hutted in the vicinity, on raised and dry ground, the officer's bungalow being near the lines, and the station is considered very healthy.

In 1835, 37 and 38, a detachment of a native regiment was stationed here, the average strength of which was 142 men; during these three years, from an aggregate strength of 428 sepoys, the admissions into hospital amounted to 267, with 5 deaths; four of which were from cholera, and the fifth was occasioned by ganrgene of the penis and scrotum, succeeding venereal ulceration of a malignant nature.

The number of admissions from the more important diseases were as follows; from *fever* 55, (of which 46 were of the intermittent type,) *cholera* 4, *diarrhœa* 9, *dysentery* 3, *rheumatism* 25, *venereal complaints* 22, with one death as mentioned above, and of *cutaneous diseases*, chiefly itch, 54; it may be remarked that no admission took place from those which have been classed as *specific diseases*.

There is a native tannah court, and jail, at this place.

The principal communication with Cochin and Choughaut, is by water, the road leading to Paulghaut being little better than a defile through jungles, infested with wild elephants, and other animals, and is moreover very unhealthy from November to March.

Table No. 1.—*General Population, for* 1836.

SUB-DIVISIONS.	Houses.	Males.			Females.			Grand Total.
		Men.	Boys.	Total.	Women.	Girls.	Total.	
Cochin	10,703	15,451	10,080	25,531	16,295	9039	25,334	50,865
Cannianoore	8413	16,763	10,512	27,275	18,303	10,295	28,598	55,873
Moogoondaparum	8511	14,008	8713	22,721	14,275	8353	22,628	45,349
Trichoor	9815	17,615	9057	26,672	17,888	7867	25,755	52,427
Tallapilly	9858	17,004	9131	26,135	16,737	8558	25,295	51,430
Chittoor	4186	6500	3805	10,305	6956	3178	10,134	20,439
Cranganore	2232	3298	2690	5988	3404	2401	5805	11,793
Total	53,720	90,639	53,988	144,627	93,858	49,691	143,549	288,176

Table No. 2.—A List of the different Religious Establishments and Schools, in the Cochin Circar.

SUB-DIVISIONS.	Hindoo Temples.			Mahomedan Mosques.			Synagogues.			Churches.			Schools.						
	Pagodas.	Places of worship for inferior castes.	Total.	Moorinen.	Cutch.	Total.	For white Jews.	For black Jews.	Total.	Syrian.	Roman Catholic.	Total.	English.	Malialum.	Tamil.	Mahratta.	Sanscrit.	Hebrew.	Total.
Cochin..............	67	150	217	18	1	19	1	4	5	2	40	42	2	16	4	0	0	2	25
Cannianoore........	209	245	454	3	0	3	0	2	2	6	21	27	2	15	1	1	0	1	20
Moogoondaparum..	299	200	499	3	0	3	0	1	1	0	9	9	0	10	0	0	0	1	11
Trichoor............	347	301	648	0	0	0	0	0	0	0	15	15	0	12	1	0	1	0	14
Tallapillay..........	392	289	681	0	0	0	0	0	0	6	6	12	1	10	0	0	0	0	11
Chittoor............	60	45	105	4	0	4	0	0	0	0	2	2	0	4	3	0	6	0	13
Cranganore.........	37	93	130	2	0	2	0	0	0	0	1	1	0	2	0	0	0	0	2
Total......	1411	1323	2734	30	1	31	1	7	8	14	94	108	5	69	9	1	7	4	96

QUILON.

Situation.

Quilon is situated in latitude 80° 53′ N., and longitude 76° 39′ E., about 50 miles north west of Trevandrum, the capital of Travancore. The ground on which the cantonment stands, rises by a gentle ascent from the sea, and includes an area of nearly five miles in circumference. It was formerly the head quarters of a subsidiary force, consisting of a company of European artillery, one European regiment of infantry, and three corps of sepoys, but for many years past, it has been occupied by the head quarters only of one native regiment; there is no natural boundary between the military cantonment and the Travancore territory, but a broad road round the cantonment, points out the line of demarcation.

Water communications.

Between Trevandrum and Quilon, the communication is almost solely by means of canals dug parallel with the low sandy coast, and connecting the different lakes, formed by the back-waters. There is also a military road adapted for wheeled carriages, though at present out of repair, and but little frequented owing to the greater facility of water communication. Northward to Alleppy and Cochin, all communication is by water; but horses and cattle can travel by an ill-formed sandy road, along the sea beach. In a north-easterly direction, there is also a line of communication with the Tinnevelly district, by a pass through the hills, but it is more properly a foot path, than a road.

Roads.

Mountains &c.

About 25 miles east of Quilon, is a lofty range of hills separating Travancore from Tinnevelly, the summits of which are between two and three thousand feet above the level of the sea; they are covered with thick jungle, and no part of the range adapted for a sanatarium, has yet been dis-

covered; the period of the rains, and immediately after, being the only time when it is believed they can be visited with impunity, especially by Europeans; as passing even a single night on them, between the months of February and June, produces fever of a dangerous and fatal character, almost to a certainty.

Fish, especially mullet, abound in the back-waters, and alligators are also said to frequent them in great numbers; in the neighbourhood of Quilon these animals are small, and by no means dangerous, but further north towards Alleppy, they are of a large size, and people are sometimes carried off by them.

The land overflowed by the back-waters, is in some places hard and gravelly, in others sandy, and in others again, slimy and muddy; in the latter situations rice is generally cultivated close to the water's edge, and strange as it may appear, the rice grounds as observed in the account of Cochin, are not supposed to generate noxious exhalations.

Rivers. Numerous mountain streams flow into the back-waters, in the rainy season, but in the vicinity of Quilon, there are only two deserving the appellation of rivers, the Ittagherry to the south, and the Pattanaueram to the northward, both of which are navigable for boats, to the distance of about twenty miles inland; their banks in the low country, form rich paddy lands, while nearer to their sources, they become steep and lofty, and are covered with thick, and in some places, nearly impenetrable jungle; like all mountain streams they become dried up after the cessation of the rains. The influence of the tide extends only a few miles from the sea, and in the monsoon is scarcely perceptible. Alligators and otters, are found in great numbers in these streams. The foregoing observation, relative to the cultivated grounds on the edges of the back-waters, are applicable to the cultivated lands on the banks of the rivers; which for a distance of twelve miles from the sea, are supposed to be free from noxious miasm.

Water. Excellent water is found in abundance all over Quilon, a few feet from the surface; and although in the centre of the cantonment there is a considerable patch of swampy ground, a pure stream flows through it at all times, and successive crops of paddy are cultivated over its entire surface.

Canals. In Travancore as already mentioned, canals have been dug to connect the different sheets of water, affording great facility in travelling, and for the transport of goods; those to the northward, are works of old standing, but those to the south, have been dug within the last nineteen or twenty years. The soil through which they have been cut, is usually a sandy quartz; they are navigable throughout the year by the largest sized canoes, but their depth varies considerably in the different seasons.

Climate. The climate of Quilon, and of the surrounding country, is very agreeable and healthy. The wet season commences about the beginning of June, and lasts till the end of October, the prevailing winds being from the south-west, and the average fall of rain is about 120 inches; the dry season which succeeds, is at first accompanied by strong land winds, during the night and morning, with a sea breeze at mid-day and in the afternoon; the nights and mornings afterwards become sultry, and in the month of May immediately before the setting in of the monsoon, the weather proves very debilitating.

From observations made in 1835 and 36, the highest range of the thermometer noted, has been 88°, and the lowest 69°, the former at 3 P. M., during the months of April and May, and the latter immediately before day break, during the land winds, in the months of December and January; the medium of the thermometer has been about 81°.

The barometer generally stands at 30, nor has it been observed by a gentleman resident at the station for several years, to vary more than half an inch annually.

To the European constitution the climate, though upon the whole healthy, is at the same time enervating. Although the thermometer seldom rises to 90°, a moist heat generally prevails, and there is never any bracing or cold weather; consequently after attacks of illness, recoveries are slow, and invalids sent to this coast from the interior, after the first few days, do not convalesce so satisfactorily as on the Coromandel side.

Soil. The soil of Quilon, and its immediate neighbourhood is sandy, the highest part of the cantonment being about 40 feet above the level of the sea. In the vicinity of the beach the sand is white, consisting of nearly pure quartz, while further inland it is of a brown colour, from containing oxide of iron. In the interior, the country is undulating presenting a constant succession of hill and valley; the hills, composed chiefly of laterite, are partially cultivated with natchnee and other dry grains, while the soil of the valleys, is a rich loam, yielding abundant crops of paddy. The valleys in the immediate vicinity of the hills, are usually covered with verdure, from the numerous mountain streams, or rivulets flowing through them.

Vegetable productions, forests, &c. The vegetable products are pepper, cardamoms, cinnamon, ginger and betel nut; coffee is also cultivated in considerable quantity, and is of excellent quality; near the coast there are numerous topes of cocoanut and palmira trees, and there are extensive forests of valuable timber trees in the northern part of Travancore, which produce superior teak; mango and jack wood trees also grow luxuriantly, and in great abundance.

Cattle, &c. There are numerous herds of small, elegantly formed cows, resembling the English breed, found all over the country, which are esteemed very sacred by the hindoo part of the population. Buffaloes of small size are likewise numerous, and goats are very common, but no sheep are bred, and those imported fall off, and die in a very

short time, the pasture on the sea coast proving very deleterious to them.

Wild animals. The jungles of Travancore abound in wild animals, such as the elephant, the bison, the royal tiger, the cheeta, several species of deer, the wild hog and many others.

Diseases of cattle and horses. During the hot season, considerable numbers of cattle are destroyed by eating too freely of the succulent vegetables growing near the banks of the backwaters, which produces a tympanitic state of the bowels, usually followed by suffocation. Horses in this climate are very liable to become weak in the loins; the nature of this disease is not correctly understood, but it appears to be an affection of the spinal marrow causing paralysis, or an approach to it, of the animal's hind quarters. A permanent cure has seldom or ever been effected, castration as mentioned in the report for Trevandrum, would appear to be the best preventive, mares and geldings being very rarely attacked by the disease. This disease is most frequent during the land winds in November, December and January.

Silk worm. The silk worm has long been bred, but from the deficiency of mulberry trees, little silk is produced.

Iron Ore. Magnetic iron ore is found in considerable quantity in different parts of Travancore, and in greatest abundance at a place called Koondra, ten miles distant from Quilon; it has never been worked to any extent.

Agriculture. From the ample fall of rain during the monsoon, wet cultivation is carried on without the aid of tanks, there being always sufficient water for the production of rice, on every spot of ground calculated for that purpose, and therefore the crops are seldom if ever known to fail.

Roads in the Cantonment. The roads in the cantonment and its immediate neighbourhood are excellent, being composed of laterite broken into small pieces, and well beat

down upon the sandy soil. The cassarina tree which was introduced several years ago, has arrived at great beauty and perfection, and lines most of the roads, forming beautiful avenues.

Diseases. Epidemic disease is rare in Quilon either among the troops or native population, and visitations of Cholera seldom occur; itch, and indolent ulcers of the lower extremities, are the diseases most prevalent among the sepoys, and their families, attributable to the nature of their diet, which consists chiefly of fish; mahomedans, owing to their more generous mode of living, suffer in this respect less than hindoos; cases of elephantiasis are occasionally met with in Quilon, and its vicinity, but in the north of Travancore, and in Cochin, this disease is very prevalent, few families being altogether exempt from it.

Fever and dysentery. Fever and dysentery are the principal diseases of the natives; the former being usually contracted by a residence in the jungles, during the dry season. The treatment adopted in fever, by the native practitioners, is the exhibition of purgatives, of which castor oil and croton, are the most common, followed by mercury; from the indiscriminate use of the latter remedy, injurious effects are often observed. Dysentery is treated by astringents only, and is by far the most fatal disease.

The prison at Quilon is under the charge of the Travancore authorities, and the number of its inmates generally varies, from 120 to 150; the sick being attended by a native doctor. The most prevalent diseases are ulcers and itch, with occasional cases of fever, and dysentery, in the treatment of which, European medicines are seldom exhibited.

Births, marriages, deaths. No register of births, marriages, or deaths, has ever been kept, nor has any correct census of the population been made; but the number of inhabitants in Quilon, may be computed at about 20,000.

Barrack. A barrack for European troops is still standing in the cantonment, which was appropriated during the period of a subsidiary force being stationed in Travancore, for a company of foot artillery; it has however been unoccupied since 1830, and is fast falling to decay.

Hospital. There is also a European hospital situated about 400 yards from the barrack, on somewhat higher ground.

The returns of sick of the European part of the subsidiary force are found to be so incomplete, that the usual table of diseases cannot be compiled from them; but a table shewing the prevailing diseases, in a native corps stationed at Quilon for four years, from 1835 to 1838 inclusive, is here appended.

No. 8.—*Table exhibiting the Number of Admissions and Deaths, amongst the Native Troops stationed at Quilon, from 1835 to 1838 inclusive.*

CLASSES	DISEASES.	from 1835. to 1838. Aggregate strength 3118. 1st. Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions and Deaths from each class of Disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
Fevers......	Febris ephemera	93	0	55	0	141	2	92	0	233	2	7 ·472	0 ·858
	,, intermit quot	33	1	22	0								
	,, remittens....	5	1	4	0								
	,, com cont....	10	0	11	0								
	Cholera.........	0	0	46	26	0	0	46	26	46	26	1 ·474	56 ·521
Diseases of the Abdominal viscera......	Diarrhœa.......	20	2	31	0	56	4	117	1	173	5	5 ·548	2 ·890
	Dysenteria acuta et chronica.	7	2	16	1								
	Obstipatio......	14	0	27	0								
	Dyspepsia......	13	0	41	0								
	Hœmorrhois. ..	2	0	2	0								
	Hepatitis acuta et chronica...	2	0	7	0	2	0	7	0	9	0	0 ·288	0 ·000
Diseases of the Lungs	Catarrhus......	8	0	48	1	16	1	65	1	81	2	2 ·597	2 ·469
	Asthma........	2	0	11	0								
	Phthisis pulmonalis..........	1	0	1	0								
	Pneumonia	1	1	1	0								
	Dyspnœa	4	0	4	0								
Diseases of the Brain.	Apoplexia......	1	1	1	1	5	1	8	3	13	4	0· 416	30· 769
	Epilepsia.......	0	0	1	1								
	Paralysis.......	1	0	3	0								
	Amentia........	3	0	1	0								
	Mania..........	0	0	1	0								
	Delirium Tremens...........	0	0	1	1								
Eruptive fevers......	Variola.........	0	0	0	0	9	0	2	0	11	0	0· 352	0· 000
	Varicella.......	8	0	2	0								
	Erysipelas......	1	0	0	0								
Dropsies....	Anasarca.......	0	0	4	0	0	0	6	0	6	0	0· 192	0· 000
	Ascites.........	0	0	2	0								
Rheumatic affections.	Rheumat. acutus et chronicus.	72	0	151	2	72	0	151	2	223	2	7 ·152	0 ·896
Venereal affections..	Syphilis primitiva..........	23	0	26	0	41	0	53	0	94	0	3 ·014	0 ·000
	,, consecutiva.	0	0	2	0								
	Gonorrhœa.....	11	0	10	0								
	Hernia humoralis..............	7	0	14	0								
	Strictura urethrae..............	0	0	1	0								
Specific diseases.....	Lepra...........	0	0	3	0	10	0	20	2	30	2	0 ·962	6 ·666
	Dracunculus....	4	0	0	0								
	Atrophia.	5	0	12	2								
	Scrophula......	1	0	5	0								
Diseases of the Eye	Morbi Oculorum..........	12	0	30	0	12	0	30	0	42	0	1 ·347	0 ·000
Do. skin..	Morbi Cutis	204	0	338	0	204	0	338	0	542	0	17 ·382	0 ·000
	Other diseases..	257	0	399	0	257	0	399	0	656	0	21 ·039	0 ·000
	Total......	825	8	1331	35	825	8	1331	35	2159	43	69 ·213	1 ·991

DISTRICT OF TINNEVELLY.

Situation & boundaries. The district of Tinnevelly forms the extreme eastern portion of the Indian peninsula, and lies between the 8th and 10th degrees of N. latitude, and the 77th and 78th degrees of E. longitude; it is bounded on the north by Madura; on the south and east by the gulf of Manaar; and on the west, by a chain of mountains which separate it from the province of Travancore.

Principal towns. The principal towns are Tinnevelly the capital of the district, and the residence of the collector; Palamcottah a military station; and Tutecoreen formerly a Dutch settlement.

The general aspect of the country presents a flat appearance, with small rounded stony hills interspersed here and there, the plain extending for several miles, both to the northward and westward of Tinnevelly, and Palamcottah; and the country being more level, than in the opposite directions, it is also more fertile, from being extensively irrigated by cuts from the Tambaravary river. This river deposits a considerable quantity of alluvium annually on the rice lands. In the south eastern direction, the country is barren, the soil being light, covered with stones, and only suitable for dry crops.

Soil. The soil is generally of a very red, almost rusty colour, from the presence of iron, and contains a large proportion of sand, forming a clay but sparingly adhesive, and not very fertile; it however produces rice in

Vegetable produce. limited quantity, with a good deal of cotton, and other dry crops; palmira trees grow well in it,

plantations of these trees being scattered over the whole plain; they attain to a large size, from which circumstance it may be inferred that the soil contains a considerable saline admixture, and also, that water is near the surface.

Town of Tinnevelly.

The town of Tinnevelly is situated on the right bank of the Tambaravary river, from which it is distant about one mile and a half, and two and a half miles from Palamcottah, on the opposite side of the same river; —it contains a population of nearly 20,000 souls.

A substantial bridge has lately been thrown across the river, by which the intercourse between the town of Tinnevelly and Palamcottah, which formerly in the monsoon season was completely cut off, is kept up, and has proved of considerable advantage to the inhabitants of both places.

Jail.

The jail, formerly at this station, was removed in 1838, to the fort of Palamcottah, in the description of which place both it, and the jail hospital, are described.

PALAMCOTTAH.

Situation and boundaries, &c.

The fort of Palamcottah elevated about 120 feet above the level of the sea, is situated on an extensive plain, one mile east of the Tambaravary river. 209

Fort.

The fort is built on a bed of granite rock, of a mouldering character, and for the most part bare of soil. Some portions of the rock within the walls, are hard, close grained and durable under exposure to the atmosphere; though it is generally soon reduced to an angular quartoze gravel, by the disintegration of the hornblend, and its separation from the quartz and felspar of which the rock is composed. The neighbouring hills consist principally of pure white quartz, and seem to be the remains of more extensive ranges of a less permanent character, and which in the lapse of ages, have mouldered into the soil composing the surrounding plains.

It may be stated generally, that the fort stands on a part of the plain slightly elevated, and that being built on a naked rock, and not having a wet ditch, it appears to be in a great measure free from the ordinary sources of malaria, with the exception of some low grounds and tanks, immediately to the northward; but as the tanks which are filled from the river, are shallow, the water being generally drawn off for the purposes of irrigation, and not allowed to stagnate, they do not seem productive of disease.

Wells. In the fort there are numerous wells which are abundantly supplied with water, found at a depth of from eight to twelve feet from the surface, at the driest season of the year. The rise of water in wells after being drawn, is usually about two feet, in 12 hours; and except in a few wells which are much worked, the water contains a considerable portion of saline matter, and in some is almost brackish.

Barracks. The barrack occupied by the European Artillery, is a commodious house, formerly the residence of the commandant, it consists of several large airy rooms; and is situated on the most elevated ground, within the fort, in an enclosed compound of considerable size, surrounded by a mud wall about five feet high. It is open on all sides, particularly towards the east, and is at such a distance from the neighbouring villages, as to prevent inconvenience from noise &c. Near the barrack compound, and only separated from it by a narrow road, are the houses of the European officers, forming an oblong square on the southern face of the fort. They are large convenient buildings, and one of them contains a public bath room, which has been found to be not only a great luxury, but conducive to health.

The place of arms, for the native troops, is situated in the centre of the village, having an open space in front large enough to admit of a regiment being drawn up in line.

Hospital. The hospital stands within a few yards of the place of arms, separated from it by a road, it is a convenient build-

ing, though old and out of repair, forming three sides of a square, and is divided into five apartments, three of which are occupied by the European and native sick, and the surgery; it is surrounded by a wall about eight feet high, enclosing a considerable area in front, with only one small entrance easily guarded, so as completely to prevent unauthorized admission or exit. The situation though not unexceptionable, is perhaps as convenient as any that could be chosen within the fort, and it requires to have the walls somewhat raised, and the windows enlarged. It is contemplated by government to erect a new hospital at this station.

Native lines. The native lines are placed outside the fort, on a table of rock sufficiently elevated to prevent accumulations of stagnant water, or the generation of malarious effluvia. From the general topographical character of Palamcottah, and its immediate vicinity, as above described, there is every reason to believe, that it will continue to be as healthy, and free from disease, as hitherto.

Jail & hospital. As previously noticed, the jail and hospital of Tinnevelly, were removed to the Fort of Palamcottah, in the year 1838; the rampart adjoining the eastern gate, with a space enclosed by a mud wall, being appropriated for the jail, within a few yards of which is the hospital, also enclosed by a wall on the north and west sides. The lowness of the roof of both the jail and hospital, the insufficient ventilation, and the limited extent of accommodation, render them very objectionable for either purpose, and though much has been done of late to improve them, they are still in some degree liable to the objections mentioned.

The hospital consists of three apartments, the principal ward of which is raised about four feet and a half above the square, but the roof being on a level with the rampart, the apartment which is formed of solid blocks of granite, is only nine feet high; the two other wards are small, and on a level with the ground, they have tiled roofs, and are also imperfectly ventilated.

The diet, clothing, hours of labour, &c. are shown in the general table annexed to the report of this division.

As the medical returns from this jail were not forwarded till 1836, the usual table of disease cannot be given. The sickness and mortality however which have occurred amongst the convicted prisoners, since that period up to 1841 inclusive, are exhibited in the following table No. 9. The percentage of admissions into hospital on the strength, is exceedingly high, but the diseases have been of a mild nature, and the mortality is below that of most other jails in the division.

During the same period from an aggregate strength of 80 prisoners waiting for trial, 127 admissions into hospital have taken place, (including 40 cases of fever, 33 of bowel complaints and 12 of rheumatism) and 5 deaths, viz. one from diarrhœa, one from dysentery, one from asthma, one from beriberi and one from compound fracture of the leg.

A Native regiment has been stationed here during the period from 1829 to 1838, and table No. 10, shews the nature of the diseases and amount of mortality which have occurred during that time, from an aggregate strength of 8094 sepoys. A small detachment of Artillery is also stationed at Palamcottah, but the number of Europeans has not exceeded 20 men; and in five years from 1834 to 1838, from an aggregate strength of 101 men, 206 admissions into hospital have taken place, (including 6 cases of fever, 14 of dysentery, 24 of hepatitis, 23 of ebrietas and 40 of venereal) and 7 deaths, one from fever, two from dysentery, one from hepatitis, two from ebrietas and one fiom erysipelas.

JAIL OF TINNEVELLY.

No. 9.—*Table exhibiting the number of Admissions and Deaths of the Convicted Prisoners, from each class of Disease, from* 1836 *to* 1841 *inclusive.*

CLASSES	DISEASES.	1836 to 1841. Aggregate strength 547. 1st Half. Ad.	1st Half. Dd.	2nd Half. Ad.	2nd Half. Dd.	Admissions & deaths from each class of disease. 1st Half. Ad.	1st Half. Dd.	2nd Half. Ad.	2nd Half. Dd.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
Fevers......	Febris ephemera	89	0	144	0	383	2	43	1	816	3	149 ·177	0 ·867
	,, intermit. quot	292	2	286	1								
	,, tertian.......	2	0	3	0								
	Cholera.........	0	0	1	1	0	0	1	1	1	1	0 ·182	100 ·000
Diseases of the Abdominal viscera......	Diarrhœa.... ..	19	0	22	2	100	4	178	5	278	9	50 ·822	3 ·237
	Dysenteria acuta et chronica.	40	4	98	3								
	Obstipatio......	4	0	5	0								
	Dyspepsia.......	36	0	52	0								
	Hœmorrhois....	1	0	1	0								
	Hepatitis.......	0	0	0	0	0	0	0	0	0	0	0 ·000	0 ·000
Diseases of the Lungs.	Catarrhus......	3	0	5	0	3	0	6	0	9	0	1 ·649	0 ·000
	Asthma........	0	0	1	0								
Diseases of the Brain.	Epilepsia.......	0	0	1	0	0	0	1	0	1	0	0 ·182	0 ·000
EruptiveFevers......	Variola.........	0	0	1	0	4	0	5	0	9	0	1 ·649	0 ·000
	Varicella.	2	0	0	0								
	Rubeola.........	2	0	4	0								
Dropsies....	Anasarca.......	1	0	0	1	1	0	0	1	1	1	0 ·182	100 ·000
Rheumatic affections ..	Rheumat. acutus et chronicus.	55	1	70	2	55	1	70	2	125	3	22 ·851	2 ·400
Venereal affections ..	Syphilis primitiva..........	1	0	1	0	2	0	6	0	8	0	1 ·462	0 ·000
	Gonorrhœa.....	1	0	3	0								
	Hernia humoralis.............	0	0	2	0								
Specific diseases.....	Lepra.........	0	0	0	0	3	0	2	1	5	1	0 ·914	20 ·000
	Dracunculus. ..	0	0	0	0								
	Atrophia........	3	0	2	1								
Diseases of the eye,..	Morbi Oculorum.......	4	0	6	0	4	0	6	0	10	0	1 ·828	0 ·008
Diseases of the skin.	Morbi Cutis.....	10	0	12	0	10	0	12	0	22	0	4 ·021	0 ·000
	Other Complaints.	160	0	148	0	160	0	148	0	308	0	56 ·343	0 ·000
	Total......	725	7	868	11	725	7	868	11	1593	18	291 ·407	1 .129

No. 10.—*Table exhibiting the admissions into hospital and deaths* *mongst the Native troops stationed at Palamcottah from* 1829 *to* 1838 *inclusive.*

CLASSES	DISEASES.	From 1829 to 1838. Aggregate strength 8094. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions & deaths from each class of Disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total Deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
[F]evers......	Febris ephemera	240	0	311	0	490	5	557	8	1047	13	12 ·935	1 ·241
	,, intermit quot.	211	4	210	7								
	,, remittens......	3	0	0	0								
	,, com cont....	36	1	36	1								
	Cholera........	16	9	62	28	16	9	62	28	78	37	0 ·963	47 ·436
[D]iseases of the Abdominal viscera......	Diarrhœa......	14	4	26	1	110	10	146	3	256	13	3 ·162	5 ·078
	Dysenteria acuta et chronica.	31	5	42	2								
	Obstipatio......	13	0	12	0								
	Dyspepsia......	45	0	64	0								
	Hœmorrhois. ..	7	1	2	0								
	Hepatitis	2	0	5	1	2	0	5	1	7	1	0 ·086	14 ·285
[D]iseases of the Lungs.	Catarrhus.........	7	0	16	1	21	2	21	5	42	7	0 ·519	16 ·666
	Asthma.........	2	1	1	0								
	Phthisis pulmonalis...	1	0	1	1								
	Pneumonia	7	1	3	3								
	Dyspnœa.... ..	4	0	0	0								
[D]iseases of the Brain.	Apoplexia.......	1	0	0	0	10	2	11	3	21	5	0 ·259	23 ·809
	Epilepsia..	1	1	0	0								
	Paralysis.... ..	3	1	4	1								
	Amentia..... ..	2	0	1	0								
	Mania.........	3	0	4	0								
	Hydrophobia...	0	0	*2	2								
[E]ruptive fevers.......	Variola..	3	0	2	0	20	0	14	0	34	0	0 ·420	0 ·000
	Varicella.......	16	0	10	0								
	Rubeola........	1	0	2	0								
[D]ropsies....	Anasarca..	4	3	3	0	6	4	4	0	10	4	0 ·123	40 ·000
	Ascites.........	2	1	1	0								
[R]heumatic affections.	Rheumat. acutus et chronicus.	146	1	160	0	146	1	160	0	306	1	3 ·780	0 ·326
[V]encreal affections ..	Syphilis primitiva.........	46	0	54	0	72	0	81	0	153	0	1 ·890	0 ·000
	,, consecutiva..	1	0	3	0								
	Gonorrhœa.....	15	0	12	0								
	Hernia humoralis............	7	0	10	0								
	Strictura urethrae..........	3	0	2	0								
[S]pecific diseases	Dracunculus....	9	0	1	0	28	2	20	6	48	8	0 ·593	16 ·666
	Atrophia.	12	1	13	6								
	Scorbutus......	0	0	1	0								
	Scrophula......	7	1	5	0								
[D]iseases of the eye....	Morbi Oculorum.........	40	0	61	0	40	0	61	0	101	0	1 ·247	0 ·000
[D]o. skin..	Morbi Cutis....	94	0	71	0	94	0	71	0	165	0	2 .038	0 ·000
	Other diseases..	597	1	586	3	597	1	586	3	†1183	4	14 ·615	0 ·338
	Total...	1652	36	1799	57	1652	36	1799	57	3451	93	42 ·636	2 ·694

* Bitten by the same dog, the disease appeared in both cases, after the lapse of three months.

† Including 350 admissions from ulcus simplex
and 540 Do Do Furunculus.

DISTRICT OF MADURA.

Madura its situation and boundaries.

The district of Madura, situated between the 9th and the 11th degrees of N. latitude, and 77th and 79th of E. longitude, is bounded on the south, by Tinnevelly and the Gulph of Manaar; on the west, by Travancore; on the north, by Coimbatore and Trichinopoly; and on the east, by Tanjore and Palk straits; the line of sea coast is about 100 miles in extent. It is divided into the talooks of Teroomangalum, Madacoolum and Maloor, forming the Government portion of the district; the remainder comprises the Zemindaries of Ramnad, and Shevagunga.

The three Government talooks contain 521,357 cawnies of land, of which 335,277 are unproductive or waste, with 446 villages, having a population of 157,000 souls.

Chief towns.

The chief towns are Madura, Dindigul and Ramnad, but from the shallowness of the coast it has no sea port towns of any importance.

Rivers.

The principal river is the Vighey or Vaygharoo, which rises in the western ghauts, and flowing in a south easterly direction, empties itself into the sea by several channels, the principal of which is north of the Paumbum pass.

Mountains.

The western mountains, dividing the district from Travancore, run in a south easterly direction, and a chain of hills, taking a N. E. course, divide the Polliums from the Dindigul valley, and extend for more than 20 miles, as far as Cotamputty, on the road from Madura to Trichinopoly.

Climate.

These hills are feverish during the months of February, March, April, and sometimes even in May—on some of the lower hills also, as the Nuttom and Coracoody ranges, running east and west, as well as near the banks of

rivers, and other low parts of the country, fevers prevail during the above mentioned period, and also in the rains, when the days are sultry, and the nights chilly.

In the talook of Maloor, when the rains fail, on which the ryots depend for the irrigation of their lands much distress has occasionally been experienced, and it has likewise been observed, that the inhabitants are more subject to attacks of dysentery, and guinea worm, when the tanks become nearly dried up. Cholera has generally prevailed to a considerable extent in this district; and native practitioners are so few in number, and so exceedingly ignorant of medicine and surgery to which little attention is paid, that it has been found necessary to place some native doctors on the peon establishment, in order to afford assistance in urgent cases, and to procure information in those of a criminal nature.

Vegetable produce. The following grains &c., are the produce of the district; paddy, raghee, cumboo, cholum, varaghoo, tany, samay, cootherayvalle, candacunnei, mochaycottay, country beans, thattapiar, pacepiar, panepiar, green gram, chalpair, vooloonthoo, horse gram, sessamun seeds, bengal gram and doll, castor seeds, landom seeds, voopoo cotton seed &c.

The S. W. monsoon, which sets in about the latter end of April, and lasts till July, is favorable for the cultivation of dry grain or punjy; and from August to November, the season is also favorable both for the cultivation of paddy, and punjy.

Roads The roads generally through the district, are good, and level, having trees planted along their sides; there are also mile stones, on the principal roads, having English and Malabar inscriptions; and wherever required, well built bridges have been constructed.

Food. The food of the poorer class of natives consists of paddy, raghee, cumboo and cholum; they are generally

employed in agricultural labour, and as coolies in cutting firewood &c.

The Paliars and Valiars with other poor tribes living on the hills, subsist chiefly on the jungle potato, and on dry grain the produce of small arable spots, which they cultivate.

Disease of Cattle. The natives state that bullocks are liable to an eruptive disease, accompanied with looseness of the bowels, caused by eating young grass which springs up at the commencement of the monsoon; they also assert that bullocks die suddenly, from eating a certain poisonous grass. Sheep are subject to the rot, but not to any great extent.

Town of Madura. The town of Madura, the capital of the district, is situated in north latitude 90° 50″, and in east longitude 78° 12″, being 87 miles south west of Trichinopoly. It is enclosed by a wall, at present in a ruinous condition, from 18 to 24 feet in height, and by a deep ditch; and contains a population of about 30,000 souls. The area on which the town is built is about three miles in circumference, a space much too limited for so large population.

Dwellings. The houses are in most instances built of mud, and towards the north side of the town are large and comfortable, but the buildings to the south are of an inferior description, crowded together, and intersected by narrow filthy lanes.

Streets. The principal streets are large and spacious, and numerous brick houses have been erected of late years.

Drains. On either side of the streets, deep channels are cut for conveying off water, all of which communicate with drains leading into the ditch; but from the little attention that has been paid to the cleansing of them, they have hitherto but very imperfectly performed the office for which they are intended.

Want of cleanliness. Considerable improvement has lately been effected, as regards the cleanliness of the town, but there remains still much to be done, owing to the inhabitants having long been permitted to make the space in front of their houses the public necessary, and the depository of all sorts of rubbish.

Dung hills are formed at the corners of the different streets, and four carts are allowed by government, for the removal of the daily accumulations, a number which is either too few, or the scavengers perform their duty with extreme carelessness, as they make but little impression on the daily collections of filth and rubbish, which still meet the eye in every quarter.

Fuel, Water. The fuel used in the fort is brought from a distance of ten miles, and is consequently expensive; and the water used by the Europeans at the station, is brought from the Secundra hills, three miles distant.

Bazar. The bazar is large, and well filled with every thing required for native consumption.

Weavers. The staple manufacture of the place is cloth, and weavers form by far the most numerous body of the inhabitants; they are a peaceable and industrious class of men, but penurious in their habits, using a very small portion of animal food, and always the inferior sorts of grain; their houses are built with little regard to comfort, the interior court-yard attached to them, is usually wet and miry, no drains being made to carry off the water, which from their occupation, they use in great quantities.

Mahomedans. Mahomedans form but a small section of the population of Madura, not exceeding 1,500, they are chiefly of the lubbay caste, and are engaged in various trades.

Labouring class. The condition of the labouring classes appears to be good; and the difficulty occasionally experienced in procuring workmen, is a sufficient proof that they are in general fully employed.

Mendicants. Beggars are rather numerous, being chiefly persons unable from age, sickness, or loss of sight, to earn a livelihood.

Sepoys habitations. The sepoys have no lines, but live chiefly in the south west corner of the town, indiscriminately with the inhabitants; this situation is open, well ventilated, and the sepoys keep their houses, and the streets in the neighbourhood, clean, and free from accumulations of rubbish.

Hospital. The sick of the detachment are accommodated in a building in the Fort, formerly part of an old pagoda which is built entirely of granite; it is therefore thoroughly dry, and is well ventilated. For table of diseases see appendix under the head Madura.

Jail, civil Hospital. The jail and civil hospital, within the same compound, and the offices connected with them, stand upon an elevated piece of ground in the Fort, the remains of a native palace; the whole being enclosed by a wall 15 feet in height. The buildings are substantial, having tiled roofs, but the circulation of air is somewhat impeded by the surrounding wall, and they are moreover liable to the objection, that in the event of epidemic disease breaking out, the communication between the sick in hospital, and the convicts cannot be cut off; and it may further be added, that a crowded Fort like that of Madura, is but an ill suited locality for a jail, which should if possible, stand in an airy situation, apart from buildings of every other description.

See table at the end of the report for diet, clothing, labour &c.

The following tables shew the nature and amount of disease and mortality which have occurred amongst the inmates of the jails during the ten years from 1829 to 1838 inclusive; they exhibit the diseases classified and point out the percentage of sick to strength, and of deaths to sick treated.

JAIL OF MADURA.

No. 11—*Table exhibiting the Number of Admissions and Deaths of the Convicted Prisoners, from each class of Disease, for 10 years.*

CLASSES	DISEASES.	From 1829 to 1838. Aggregate strength 3119. 1st Half. Ad.	Dd.	2nd Half. Ad.	Dd.	Admissions & deaths from each class of disease. 1st Half. Ad.	Dd.	2nd Half. Ad.	Dd.	Total admissions from each class.	Total Deaths from each class.	Average percentage of sick to strength.	Average percentage of deaths to sick.
Fevers......	Febris ephemera	239	0	162	1	381	7	297	9	678	16	21 ·737	2 ·359
	,, intermit.......	130	2	113	1								
	,, tertian.......	0	0	2	0								
	,, remittens....	0	0	1	0								
	,, continua.....	12	5	19	7								
	Cholera.........	31	21	45	25	34	21	45	25	79	46	2 ·532	58 ·227
Diseases of the Abdominal viscera......	Diarrhœa..	151	25	189	40	187	31	2[illegible]8	47	445	81	14 ·257	18 ·202
	Dysenteria acuta et chronica.	35	9	67	7								
	Obstipatio......	1	0	2	0								
	Hepatitis.......	0	0	0	0	0	0	0	0	0	0	0 ·000	0 ·000
Diseases of the Lungs	Catarrhus......	6	1	25	1	9	3	30	4	39	7	1 ·250	17 ·948
	Asthma........	1	1	2	0								
	Phthisis pulmon	1	1	2	2								
	Hœmoptysis ...	1	0	1	1								
Do. Brain..	Apoplexia......	0	0	3	1	9	2	4	1	13	3	0 ·416	23 ·076
	Epilepsia..	6	2	1	0								
	Paralysis.	1	0	0	0								
	Amentia........	1	0	0	0								
	Mania..	1	0	0	0								
Eruptive fevers.....	Variola	11	1	2	1	52	1	82	1	134	2	4 ·296	1 ·492
	Varicella........	40	0	63	0								
	Rubeola........	1	0	16	0								
	Erysipelas.......	0	0	1	0								
Dropsies...	Anasarca.... ..	14	9	12	2	15	10	12	2	27	12	0 ·865	44 ·444
	Ascites...... ..	1	1	0	0								
Rheumatic affections.	Rheumat. acut. et chronicus..	66	3	47	2	66	3	47	2	113	5	3 ·62[illegible]	4 ·424
Venereal affections..	Syphilis Primitiva..........	1	0	3	1	7	0	10	1	17	1	0 ·545	5 ·882
	Gonorrhœa	3	0	2	0								
	Hernia humoralis....	3	0	4	0								
	Strictura urethrae..........	0	0	1	0								
Specific diseases.....	Atrophia.., ...	3	1	1	1	31	2	12	1	43	3	1 ·378	6 ·976
	Dracunculus ...	27	0	11	0								
	Scrophula.......	1	1	0	0								
Diseases of the eye ..	Morbi Oculorum..........	10	0	17	0	10	0	17	0	27	0	0 ·865	0 ·000
Do. skin..	Cutis..	46	0	36	0	46	0	36	0	82	0	2 ·629	0 ·000
	Other diseases .	917	3	832	6	917	3	832	6	1749	9	56 ·075	0 ·511
	Total....	1761	86	1682	99	1761	86	1682	99	3446	185	110 ·484	5 ·638

JAIL OF MADURA.

No. 12.—*Table exhibiting the Number of Admissions and Deaths of the Prisoners under trial, from each class of Disease for 10 years.*

CLASSES	DISEASES.	From 1829 to 1838. Aggregate strength 600. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions & deaths by each class of disease. 1st Half. Ad.	1st Half. Dd.	2nd Half. Ad.	2nd Half. Dd.	Total admissions from each class.	Total deaths from each class.	Average annual per centage of sick to strength.	Average annual per centage of deaths to sick.
Fevers......	Febris ephemera	5	0	10	0	10	0	25	0	35	0	5 ·833	0 ·000
	,, intermit. quot	3	0	15	0								
	,, tertiana'.....	0	0	0	0								
	,, remittens....	2	0	0	0								
	,, continua.....	0	0	0	0								
	Cholera.......	8	4	5	3	0	4	5	3	13	7	2 ·166	53 ·846
Diseases of the Abdominal viscera.	Diarrhœa......	16	4	32	5	19	4	38	6	57	10	9 ·500	17 ·543
	Dysenteria acuta et chronica.	3	0	6	1								
	Hepatitis........	0	0	0	0	0	0	0	0	0	0	0 ·000	0 ·000
Diseases of the Lungs.	Catarrhus.......	1	1	0	0	1	1	0	0	1	1	0 ·166	100 ·000
	Asthma.......	0	0	0	0								
Diseases of the Brain.	Apoplexia......	1	1	0	0	3	1	1	1	4	2	0 ·666	50 ·000
	Epilepsia.......	1	0	0	0								
	Mania..........	1	0	1	1								
Eruptive Fevers......	Variola.........	3	1	1	1	4	1	9	1	13	2	2 ·166	15 ·384
	Varicella.......	1	0	8	0								
Dropsies...	Anasarca.......	1	1	1	1	1	1	1	1	2	2	0 ·333	100 ·000
	Ascites........	0	0	0	0								
Venereal affections ..	Syphilis primitiva..........	0	0	1	0	0	0	1	0	1	0	0 ·166	0 ·000
Rheumatic affections.	Rheumat. acutus et chronicus..	3	0	1	0	3	0	1	0	4	0	0 ·666	0 ·000
Specific diseases.	Atrophia........	0	0	1	0	0	0	0	0	1	0	0 ·166	0 ·000
Diseases of the eye.	Morbi Oculorum.........	0	0	0	0	0	0	0	0	0	0	0 ·000	0 ·000
Diseases of the skin.	Morbi cutis....	4	0	3	0	4	0	3	0	7	0	1 ·166	0 ·000
	Other diseases..	15	0	27	1	15	0	27	1	42	1	7 ·000	2 ·380
	Total....	68	12	112	13	68	12	112	13	180	25	30 ·000	13 ·888

Remarks on the preceding tables.

The average annual numerical strength of the convicts during the ten years, has been 312, and the admissions into hospital 344, or 110 per cent; the number of deaths annually during the same period has averaged 18, or 5·931 per cent on the strength, the total number of admissions being 3446, of deaths 185, and the aggregate strength 3119.

The sickness and mortality were not increased in this jail in 1833 and 1834, as in those already described; but in 1837, the mortality was nearly doubled from cholera and diarrhœa.

The most numerous admissions have been from *fever*, *bowel complaints*, particularly *diarrhœa*, *eruptive fevers* and *rheumatism*, and the greatest mortality has been produced by *bowel complaints*, *cholera*, *fever* and *anasarca*, as the following table will shew.

Table No. 13.

	1829.		1830.		1831.		1832.		1833.		1834.		1835.		1836.		1837.		1838.		Total.	
	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.
Fever......	26	1	33	2	63	2	49	1	124	0	69	1	50	1	59	1	76	3	123	4	678	16
Cholera....	6	3	1	1	0	0	21	14	17	10	2	2	0	0	1	0	29	15	2	1	79	46
Diarrhœa...	35	10	37	5	46	8	30	6	25	5	36	8	30	7	39	4	40	10	19	2	340	65
Dysentery..	6	0	1	0	9	4	7	0	4	3	0	0	7	2	0	0	28	2	40	5	102	15
Anasarca...	1	1	3	3	3	2	2	1	0	0	5	2	7	1	3	0	1	1	1	1	26	12
Total admissions & dths	74	15	75	11	121	16	109	22	173	18	112	13	100	11	102	5	174	31	183	13	1225	155
Strength...	221		246		356		343		325		424		330		280		302		218			

Thus more than 5-6ths of all the mortality has been occasioned by these five diseases alone, or 155, out of 185.

Of these diseases however diarrhœa is the most important, and it is observed by the medical officers who have been in charge of this Jail, that it has prevailed more or less, in this fatal form, ever since the prison was first occupied; and moreover the records of the hospital also shew, that in most of the severe cases of fever, and in almost all the fatal cases of this and other diseases, diarrhœa in the latter stages became a promi-

nent symptom, and was evidently the cause of death, in the majority of the fatal cases.

The following extracts from the medical officers' reports will illustrate more clearly the nature of this affection.

" This disease (diarrhœa) called for great attention, because medicine was found to have little or no power in controlling it; in almost every case it had existed for three or four weeks previous to admission into hospital, with frequent purging, though without pain, loss of appetite, and progressive emaciation. Under the use of medicine the evacuations were often reduced to three or four in number during the 24 hours, but they still continued of a whitish yeasty appearance, and copious, and on an increase of the purging occurring the patient rapidly sunk. On examination, ulceration of the mucous coat of the large intestine was invariably found."

" This disease was attributed to the confined state of the dormitories or cells. In the early part of the year all the prisoners whose appearance indicated unusual weakness were relieved from all work, but permitted to take sufficient exercise in the open air, and a light nutritious diet was given, with a view of checking the complaint, but without success."—*Dated* 30*th June* 1829.

" Causes of diarrhœa. The Jail being situated in the centre of the town was of course influenced by the same causes which were at that time so generally affecting the inhabitants of Madura, but at the same time it is equally true, that the crowded state of the prison operated throughout most injuriously upon the health of its inmates; the cells are only calculated to contain about 250 persons, but the actual number in confinement was 360. The dormitories are as well ventilated as it is possible for them to be, with sufficient regard to the security of the prisoners, and they are kept scrupulously clean; but from their crowded state, the heat of the apartments soon becomes excessive, and the stench, one or two hours after the prisoners have been locked up, very offensive."—*Dated* 30*th Dec.* 1837.

The table of diseases, amongst the detachment of native troops at this station, given in the appendix under the head Madura, affords a stricking contrast in the amount of sickness and mortality as compared with the inmates of the jail. The total admissions into hospital from the detachment, during the same ten years, have been 639 with 20 deaths, from an aggregate strength of 1542 men. The prisoners are probably equally well fed with the sepoys, they are also obliged to be cleanly in their habits, and are not overworked ; in one essential point however they are placed in very different circumstances, viz. sleeping in crowded apartments and breathing during the night a vitiated atmosphere.

During the year 1837 above adverted to, 97 admissions into hospital took place from the detachment of sepoys, 215 in number, and one death from cholera occurred ; in the same year, from an aggregate strength of 373 prisoners, including those waiting for trial, 450 were received into hospital, of whom 38 died, viz. sixteen from cholera, fourteen from bowel complaints, and the remaining eight from fever, anasarca and other diseases.

In 1836, the town and surrounding country, which had been perfectly healthy, experienced a severe visitation of Cholera, which broke out three days after the 9th Regiment N. I., suffering from that disease, had passed under its walls ; on the 3d July a case of cholera occurred in a lubbay, and the disease soon spread over the southern portion of the town ; it found in Madura, from the causes before mentioned, a locality containing all the usually admitted predisposing causes of disease ; and upwards of 1,500 of the inhabitants fell victims to it. It will be observed from Table No. 13, that this epidemic did not spread to the prisoners in the jail.

The regiment, having passed through villages in which the disease was prevailing, was attacked at Mellore, within 30 miles of Madura ; from that town to Palamcottah, whither it was proceeding, its line of march could be distinctly traced, by the ravages the epidemic made in every village, in the vicinity of the encamping grounds.

Pills composed as follows, were made up in considerable quantities, by the medical officer at Madura, for general distribution to the inhabitants suffering from cholera, and were, in his opinion, often followed with good effect.

℞	Pulvis Lyttæ....	grains 2
	Opii	grains ¼
	Acet: Plumbi	grains 3
	Camphoræ	grains 1

One pill was given every hour, till 6 or 7 were retained, using other means at the same time for restoring the balance of the circulation, such as artificial heat, frictions, &c.

DINDIGUL.

Situation and extent.

The district of Dindigul is situated between 10° and 11° N. latitude, and 77° and 79° E. longitude, its extreme length from north to south being eighty, and its greatest breadth from E. to W. seventy miles, the whole comprising a superficial area of 4,500 miles, of which 200 are hills and wood, the remainder being a fertile champaigne country.

Boundaries.

It is bounded on the north by Coimbatore, on the south by Madura and Tinnevelly, on the east by Trichinopoly, and on the west it is separated from Travancore by a high range, called the Pulney hills.

Talooks.

It is divided into four talooks viz. Nellahcottah, Toddy Coomboo, Jampillay and Marungapoory.

Rivers.

Its principal rivers are the Kodaven, the Mangerry, the Vagachay, the Kul and the Eiloor.

The Kodaven, is a stream of considerable magnitude, which in the rainy season is very deep and rapid ; it rises in the western chain of hills, and running north-easterly falls into the Cauvery, there are numerous villages on its banks with considerable tracts of rice ground, which afford two crops annually.

The Mangerry or Manga Nuddee, rises in the Nellahcottah district, to the northward of the source of the Kodaven, and running also in the same direction, falls into that river in the Toddy Coomboo talook.

The Vagachay, rises also in the same range of hills, and running easterly, and north-east, crosses the Madura

and Nutham roads, it then divides into the Pungancy and Mulipaddy rivers, which intersect the plain of Dindigul, and being joined by the Kul and Eiloor, two small streams which rise in the low hills to the eastward, they again unite, and running north, fall into the Kodaven.

Tanks wells &c. Besides rivers, there are in the district, 3517 tanks, and 10,577 wells, but for agricultural purposes the inhabitants depend chiefly on the rains, which in general during six months of the year, are abundant, and two crops of dry grain are not unfrequently obtained annually.

Both rivers and tanks contain excellent fish, which is plentiful in the market at Dindigul; the best kinds are large manil or sand-fish, besides which eels, prawns, and various descriptions of small fish are procurable. In the Nellah-cottah district, in a well belonging to a person named Mootoo Moodiar, a large species of cockle or muscle is found, as large as a moderate sized oyster, having a dark brown circled shell, with a bright pearly inside, it is considered wholesome as food, and it likewise is said to produce pearls. The ponds and tanks become dried up during the hot season, but the wells contain water throughout the year.

Mountains, hills &c. The chief mountains are the Pulneys, lying about 20 miles west of the town of Dindigul, and separating the district from that of Malabar. They are chiefly composed of gneiss,and rise to the height of 7,000 feet above the level of the sea; the climate of these hills, is said to be equal to that of the Neilgherries, and they are said to surpass themin the beauty of the scenery.

The Serroo Mullays, about five miles south of the town of Dindigul, rise to the height of 3,500 feet, or thereabouts, and extend from north to south 27 miles, and from east to west 20—they also consist of gneiss with veins of felspar, and a greenish micaceous schist, which is easily split into transparent layers; the soil, is either the light red sandy earth, so prevalent throughout the whole district, rarely found to be

more than three feet in depth, or a rich black vegetable mould, formed from decayed roots and leaves. These hills are undulating and peaked, and intersected by rivulets ; they have no table land of any extent, and large tracts of them are covered with wood, amongst which are some fine forest trees.

The ascent on the Dindigul side is very steep, but the road is winding, and there are few parts that might not be ridden over, upon a strong pony.

On visiting these hills in the month of October, the thermometer in tents, stood at 62° at sun-rise, and 72° at noon, the weather being cloudy, with occasional showers ; the air, at all times, was found to be delightfully fresh and bracing, giving a feeling of elasticity and enjoyment.

If bungalows were erected on the hills, they would form a desirable residence for invalids from Dindigul and Trichinopoly, and excellent gardens might be made on them, at a trifling expense ; from the former place, all the necessaries of life are daily procurable. The inhabitants of the few small villages on these hills, appear to be very poor, and subsist principally by cultivating plantains, they also grow oranges, citrons, jack fruit and pine apples ; and they have a small stock of poultry, horned-cattle and goats. They are not so robust as the people of the plains, but are not known to be subject to any particular complaints, the most prevalent disease is fever.

Climate. The climate of Dindigul is perhaps equal to that of any part of the Carnatic. In May, which is the hottest month of the year, the thermometer ranges from 79° to 98° ; and in December and January, the coldest months, it ranges from 66° to 80° ; and at this season the climate is peculiarly favorable to the growth of European vegetables. In July the thermometer ranges from 80° to 90° ; in August from 76° to 88°, September and October, giving nearly a similar result, the

weather being hotter or colder according to the quantity of rain. The rains generally commence in July, and continue at intervals until February; the nights are always cool, and the climate though unfavourable to persons afflicted with asthmatic complaints, or other pulmonary affections, is considered in general salubrious.

Soil. The soils are chiefly red, silicious, and argillaceous earths, of from three to four feet in depth, though frequently less, lying upon gneiss rock; the following are the several varieties found throughout the district. 1st, *cashel* or black soil, a mixture of clay and sand, which is exceedingly fertile, and well suited for the growth of paddy, raggy, cholum, and cotton; 2d, *puddagay*, a mixture of black and red earth, which yields two, and often three crops in the year; 3d, *shevel* or deep red loam, well adapted for the culture of various sorts of dry grain, and favorable to the growth of leguminous plants, and many species of pulse; 4th, *manil* or sand, which is much esteemed for cultivating cumboo, rape seed and horse gram; 5th, *sharalay* or light red stony earth, which produces castor oil, and a few species of pulse; 6th, *shokum*, white argillaceous earth, strongly impregnated with lime, in this soil cotton, oil nuts and rape seed, are successfully cultivated; 7th, *kuller*, black argillaceous earth, in which cotton grows best; 8th, *veppel*, saline earth, from which the inhabitants extract an impure muriate of soda; 9th, *orer munnoo*, a description of fuller's earth, used in bleaching and washing, which contains impure carbonate of soda; 10th, *chunam kuller*, or common lime stone, which is found in many parts; 11th, a mixture of kuller and veppel, producing a white chalk found only in small quantities at certain depths. From the general sandy or feruginous nature of the soil, noxious exhalations are rare, and confined to particular localities.

Vegetable productions. The principal productions are paddy, cholum, raggy, tobacco, cotton, betel nut, Bengal and common gram, rape seed, oil nut, and sugar canes; bamboos, and a light sort of timber used in the construction of houses, are procured from the neighbouring hills; oranges

citrons, guavas, mangoes, jack and other fruits are grown every where, and potatoes, beans, peas, knolcole, cucumbers, cabbage, carrots and turnips are cultivated, in some instances, from seed procured from the Neilgherries or Bangalore; many medicinal plants are also produced in the district, amongst which are cheyreta, castor oil, croton, sarsaparilla*, and senna, the last being equal to that in general use in the hospitals of of this presidency, which is brought from Egypt.

Animals. Sheep and goats abound, black cattle are also reared, but are less valuable than those of Diaporam and Coimbatore, elephants are found in the Pulney mountains, cheetas occasionally visit the plains, and wild hogs, foxes, jackals, and jungle cats, with a variety of monkeys are common; elk and bison are found both on the Pulney and Sorroomullay hills; florican, snipe, pigeons of varieties, and water-fowl may be purchased at Dindigul from the shikarees, at a very reasonable rate.

The principal mineral productions are iron, in a state of oxide, talc and lime.

Wet grain is cultivated near tanks and rivers; but the chief produce is dry grain; the ground after being manured is ploughed by bullocks, and the seed being once deposited, the ryots trust to the rains and dews for the nourishment of the plant, and are seldom disappointed. The famine which occurred in the year 1833, fell very lightly upon the people of Dindigul.

Roads. The roads throughout the district are sufficiently good to afford easy communication by means of bullock bandies, the best roads are those to Trichinopoly and Nutham; there is a daily tappaul or post to Trichinopoly and Madura, and in the dry season it reaches Madras in four days.

Population. The number of inhabitants at present in the four talooks, is 217,060, and of villages and hamlets 2246, which are pretty equally dispersed over the district.

* Indian sarsaparilla or Periploca Indica, Lin:

Dwellings. The houses are built of mud, the rafters being of bamboo, they are either tiled or thatched, and in the better villages white washed; compared with native houses in general, they are of a superior description; the poorer sort of people lie on the ground, but are well provided with cumblies, and the more opulent, including sepoys and pensioners, sleep on cots or char-paes.

Habits. The usual hour of rising, is from four to six A. M. and of retiring to rest, from eight to ten P. M. Two meals a day are usually eaten, one at 10 A. M., and one at 5 or 6 P. M., but many also take an early morning meal; the cold bath is in very general and daily use.

Diet, &c. The higher caste hindoos who are very numerous, live altogether upon vegetable food of various kinds, with milk and condiments, such as pepper, chillies and pickles. The musselmans, and lower grades of hindoos eat poultry, fish and eggs, although rice constitutes their principal article of diet; at Dindigul a considerable quantity of mutton is daily consumed, and beef is procurable occasionally, but a large proportion of the labouring people subsist upon raggy, dal-chinnee and cholum, made into a paste with buttermilk. Tobacco is used by all classes, and the consumption of arrack is likewise considerable; the spirit is procured by the distillation of jaggery, along with the bark of various trees, the most common of which is that of the vellalum and kurroovalum, or black and white indian gum arabic trees. Good water is every where abundant, but it has been observed in the hot season, when the wells and tanks are very low, that amongst the sepoys and natives of the town, who prefer rain water. guinea worm is of very frequent occurrence.

Manufactures. Some silks and muslins are manufactured in the town of Dindigul, and excellent black and white cumblies are made by the women, from the Carumber wool, which is abundant; coarse cotton cloths and handkerchiefs, are also made in several villages. At Gootum and Kullumpetty, iron was formerly manufactured upon an extensive scale, but the establish-

ments at which the ore was smelted, are gone to decay, and it is now only produced in a limited quantity in some villages, from feruginous earth. Paper is also manufactured, and implements of husbandry, and utensils for household purposes are made in every village, which possesses its own carpenters, braziers, silver smiths and iron workers, though the bulk of the population are cultivators. The chief articles of import, are sugar, salt and spices; and of export, cotton, wool, ghee, paddy and grain of different kinds, iron, wax, honey, betel nuts, tamarinds, gingilie and castor oil, arrack, tabacco, paper, muslins and silks.

Police.

The Government police of the district, consists of a thasildar and eighty peons to each division, with a head man to every village, each having its own peculiar internal regulations. The bazaars and larger villages are kept clean by men who receive rice or some other payment, from the dookundars or shop-keepers, and the residences of private families, are kept in order by their own servants; no privies are attached to the houses.

The labouring poor are employed chiefly in out door work, the wages of a man being three annas per day, and of a woman one anna, and from the cheapness of clothing and food, there are few places where the poor are better off.

From the records of the police it would appear, that crime is of less frequent occurrence in this district, than in any part of the surrounding country, and the people are for the most part, a moral and well conducted race.

Schools.

Schools are established in every respectable village, where the children of such as can afford to pay a small fee to the teacher, are instructed in reading and writing tamil, in arithmetic, and in religion; they are generally sent to school at the age of 5 years.

Endemic diseases, Fever.

Fever prevails amongst the troops, more or less, throughout the year, but not to any great extent, and appears to arise principally from exposure to the

night air when on guard, as the wives and children of the men are more rarely attacked; amongst the inhabitants, fever is most prevalent in the hot weather. The most usual type of the disease is the quotidian intermittent, the paroxysms usually recurring in the evening, attended with pains in the limbs, and heaviness of head, a perfect intermission taking place in the morning, when the pains subside, leaving a feeling of weakness and heaviness only. Rigors occasionally precede the hot state. Although this is the most common form of the disease, the paroxysms come on at such irregular intervals, and vary so much in the periods of remission and intermission, as to defy all attempts at classification. Cases of quotidian remittent are also met with, occurring daily in the morning, the paroxysms being preceded by rigors. Quinine, administered at an early period of the disease, rarely fails to effect a cure in a few days, given in doses of from two to three grains, the stomach and bowels having been previously cleared out by an emetic and purgative. Should the secretions from the bowels be of an unhealthy character, mercurial purgatives become requisite, though not to the exclusion of quinine, which should also be given during intermissions, to prevent the recurrence of the paroxysms. Quinine aided by the remedies mentioned seems to exert a powerful influence in correcting diseased secretions, the tongue becoming cleaner, thirst diminishing, and the alvine evacuations improving under its use, but purgatives should in all cases be occasionally administered for the removal of morbid accumulations.

Guinea Worm. Guinea worm, which is common during the hot weather, is treated by the application of a poultice over the inflamed part, and should much surrounding inflammation exist, leeches become necessary; when the head of the worm protrudes, it is secured to a thick straw, round which it is rolled daily, and in this manner gradually extracted.

Ulcers. Ulcers of the legs and feet prevail during wet weather, both amongst the sepoys and villagers, and are chiefly

occasioned by want of cleanliness and poor diet, as the higher classes are exempt from them. The best application is basilicon and turpentine applied warm to the sores, and in bad cases, the administration of bark and wine is found to be very serviceable.

Ophthalmia. Ophthalmia occurs annually as an epidemic during the months of July and August, especially amongst children, the conjunctiva becoming highly inflamed, with tumefaction of the eye lids, followed by a purulent discharge; the cause of this disease is not very evident, but it is generally attributed to the effects of the hot winds; the best application is lunar caustic in solution.

Small Pox. Small pox also used to appear annually as an epidemic in the autumn, but since vaccination has been so widely diffused, the cases of it are comparatively rare.

Venereal. Venereal disease is not found to prevail to any considerable extent in this district.

Management of Infants. The day after the birth of a child, a dose of castor oil is given to it, and in the generality of instances, repeated daily for the first two or three months, and the child is washed every third day; after the first month it is usual to give it a few drops of the juice of the euphorbium, with boiled milk, as a preventive of sickness; should the mother have abundance of milk no other food is given for nine or ten months, after which the child is fed on rice, congee or sago.

No statements, either of diseases or deaths, are kept by the natives, and when especially called for by the authorities on particular occasions, they are made out from the information furnished by the heads of villages, collected from the reports of the native doctors, and but little dependance can be placed on these; no registers either of marriages or births have been kept, except in the district of Toddy Coomboo

A malignant epidemic fever raged, in the year 1810, in the southern provinces, occasioning great mortality, to such an extent indeed, that Dindigul was of necessity abandoned as a military station, and not re-occupied till the latter end of 1813. To investigate the cause of this fatal malady, a committee of medical officers, consisting of a president and two members*, was appointed in 1811, and the result of whose inquiries was submitted to government and afterwards published. About the middle of 1812, the ravages of the fever abated considerably, and shortly after disappeared altogether; in the year 1816, the fever again returned, and it would appear, with greater violence than before. The following table is extracted from the report of the committee, and shews the amount of the population, and mortality in the several districts.

	Population.	Deaths.	Per cent-tage of deaths.
Madura for 12 months.	245,654	24,626	10
Dindigul 12 Do.	298,654	21,510	$7\frac{1}{4}$
Coimbatore 16 Do.	298,606	22,451	$3\frac{3}{4}$
Tinnevelly 5 Do.	690,696	38,202	$5\frac{1}{2}$
Total. . . .	1,833,610	106,789	$5\frac{3}{16}$

Since the above scourge, it does not appear that this district has been visited by any epidemic, the mortality in 1833 and 1834, was however great; nevertheless, it was found to have fallen far short of that which occurred in other parts of the country; this is attributable chiefly to the circumstance of the late dearth, at that period, having been comparatively but little felt.

* Superintending Surgeon W. Ainslie M. D. President.
Surgeon A. L. Smith...... } Members.
" M. Christie M. D. }

In 1833, the aggregate population of the sub-collectorate of Dindigul was 268,000, in 1834, 263,840. In the first of these years, that in which the greatest distress prevailed, the proportion of deaths per cent, to population, was only $1\frac{1}{16}$, and in the second not more than $1\frac{1}{32}$. The most prevalent and fatal diseases have been cholera, fever, and small pox; in 1833, no less than 5,585 of the inhabitants were attacked by cholera, being about 2-7ths of the total number of sick treated, more than one half of whom died; in 1834, the number was only 2,518 or about $\frac{3}{25}$ of the whole sick, of whom rather less than one half died. In 1833, the febrile cases amounted to 4762, rather more than $\frac{1}{5}$ of which terminated fatally; in 1834, the number did not exceed 4,593, of which however, upwards of $\frac{1}{4}$ proved fatal; in 1833, the cases of small pox amounted to 3,230, upwards of $\frac{1}{3}$ of which proved fatal; in 1834, to 2,074, of which $\frac{1}{5}$ died. It is highly probable however, that the knowledge of diseases possessed by the native functionaries engaged in filling up the abstract from which these results are taken, must have been very limited, and that several mistakes have occurred in their classification, and that one disease was not unfrequently mistaken for another. In 1833, the total of sick was 18,874 and of deaths 4,747, being $25\frac{1}{7}$ per cent; in 1834, the total of sick was 18,414, the deaths 3,554, or $19\frac{1}{3}$ per cent.

There can be no doubt that the proportion of deaths to the total of sick, is rated too high, as it may be presumed there were not a few suffering from disease, who were not reported.

Annexed is a table shewing the number of inhabitants for 1833, 34, and 35, exclusive of the Shenkary division.

Hospital. The hospital at Dindigul is appropriated for the sick of the garrison and sub-collectorate, but the villagers sometimes apply for admission in severe cases, and a considerable number of them also receive medicines as out patients. The hospital is well situated in a good compound at a convenient distance from the lines, it is very airy and commodious, and capable of containing 50 beds, it has a surgery, cookroom,

quarters for an assistant apothecary, dead house, guard room and privy, all in good order.

The native hakeems are not without skill in the cure of some diseases, particularly the milder forms of leprosy; the most powerful of their remedies is arsenic, which is given in syphilis, fever, and some cutaneous diseases; calomel, jalap, bark, with a few other European medicines, are in request, and freely used by them, when they can be obtained. Dietetics form much of their curative plan, upon the supposition that all articles are either of a heating or cooling nature; they have several books upon medicine and surgery, the works of Aghastier being in most estimation, this person besides writing several books, is said to have performed miracles; there is a small choultry and a tank built in commemoration of him, below the S. W. face of the fortified rock of Dindigul.

Longevity. With regard to the longevity of the inhabitants, no correct information can be obtained, but many persons may be seen upwards of three score and ten; the natives of the hills however rarely attain to that age.

Town of Dindigul. The town of Dindigul, the capital of the district, is situated in the middle of an extensive plain, measuring 25 miles from north to south, and 30 miles from east to west, it is entirely surrounded by hills and mountains, and elevated 700 feet above the level of the ocean.

It is built on a gentle slope, its length from north to south, being 987 yards, and its breadth from east to west, 927 yards. In 1837 it contained 1833 houses, and 6,550 inhabitants, exclusive of the detachment of troops; the streets are wide, the houses well built, and the bazaars plentifully supplied with all the necessaries of life. The military lines are situated at the north-west corner of the town, on the highest part of the slope, they are well drained, and always dry and clean.

The cutcherry and collector's bungalow are situated about a quarter of a mile from the town, upon the highest part of the plain. The officers' bungalows lie between the town and

cutcherry, upon either side of the Trichinopoly road, placed in good compounds enclosed with euphorbium or aloe hedges; the teak, tamarind and various trees and shrubs are cultivated, and give an ornamental appearance to the town, and to the compounds in particular. The soil is the light and dark ferruginous earth, already spoken of, lying upon gneiss, which in some places has decayed into a light grey soft stone, easily dug by a pick-axe or spade; on the sides of wells some of which are deep, the soil appears, for the most part, to be about three feet in thickness, and the rock is veined with felspar, and sometimes with a soft stratum of clay. The water round Dindigul is good, but that preferred for drinking is obtained from the brahmin's bowrie, to the north of the town, and from a reservoir at the bottom of the rock, which is filled by the rains, and which when filtered is remarkably pure and wholesome.

The fortified rock on the western side of the town is a very remarkable looking wedge shaped mass of gneiss, veined with felspar, being a conspicuous object from all parts of the plain; the strata at its summit dip at about an angle of 75°, and lower down become exceedingly tortuous; nodules or irregular shaped masses of felspar three or four yards in circumference are here and there imbedded in its structure; and in some fragments detached from the southern side garnets have been found. The rock is about 400 feet in length, and 300 in breadth, and its height by barometrical measurement has been ascertained to be 280 feet, it is perfectly bare of vegetation, with the exception of a few patches of scanty soil in the upper fort, inwhich some stunted trees and shrubs grow, the ascent is on the eastern side by a flight of stone steps, the other sides being perpendicular; near the summit there is a well of great depth, erroneously supposed by the natives to be unfathomable, the water of which is exceedingly pure, and might easily be conveyed by pipes to the town, which would afford a constant supply, though perhaps not sufficient for the wants of the whole population.

Dindigul having been only occasionally occupied by troops since 1829, the usual table of diseases cannot be given; the

following however will shew the nature of those which have occurred during the years 1833, 35, 36 and the first six months of 1838, from an aggregaյe strength of 2,255 sepoys.

No. 14.—*Table exhibiting the admissions into hospital and deaths, amongst the native troops stationed at Dindigul, during the years* 1833, 1835, 1836, *and first half of* 1838.

Aggregate strength 2255		Admitted.	Died.	Total admissions from each class.	Total Deaths from each class.	Percentage of sick to strength.	Percentage of Deaths to sick treated.
Fevers.....	Febris ephemera	99	0	430	4	19 ·064	0 ·930
	,, intermit quot.	288	1				
	,, remittens.....	4	2				
	,, com. continua..........	39	1				
	Cholera........	3	3	3	3	0 ·133	100 ·000
Diseases of the Abdomiual viscera......	Diarrhœa..... ..	35	2	101	2	4 ·479	1 ·980
	Dysenteria acuta et chronica.	17	0				
	Hœmorrhois....	6	0				
	Obstipatio......	28	0				
	Dyspepsia......	15	0				
	Hepatitis.......	2	0	2	0	0 ·088	0 ·000
Diseases of the Lungs.	Catarrhus......	27	2	33	3	1 ·463	9 ·090
	Asthma........	3	0				
	Phthisis pulmonalis..........	1	1				
	Pneumonia.	2	0				
Diseases of the Brain.	Paralysis.......	10	3	13	4	0 ·577	30 ·769
	Mania..........	2	0				
	Delirium Tremens...... ..	1	1				
Eruptive fevers.......	Variola.........	4	0	28	0	1 ·241	0 ·000
	Varicella........	22	0				
	Erysipelas.......	2	0				
Dropsies....	Anasarca.......	2	2	5	2	1 .221	40 ·000
	Ascites.	3	0				
Rheumatic affections.	Rheumat. acutus et chronicus.	147	1	147	1	6 ·588	0 ·748
Venereal affections....	Syphilis primitiva......... ..	44	0	71	0	3 ·148	0 ·000
	,, consecutiva..	2	0				
	Gonorrhœa.....	12	0				
	Hernia humoralis.............	11	0				
	Strictura urethræ..........	2	0				
Specific diseases......	Beriberi........	0	0	74	0	3 ·281	0. 000
	Dracunculus....	69	0				
	Lepra..........	1	0				
	Scrophula......	4	0				
Diseases of the eye...	Morbi Oculorum............	165	0	165	0	7 ·317	0 ·000
Do. skin.	Morbi Cutis....	80	0	80	0	3 ·547	0 ·000
	Other diseases...	457	0	*457	0	20 ·261	0 ·000
	Total..	1609	19	1609	19	71 ·352	1 ·180

* Of this number 157 were cases of ulcus.

Statement shewing the number of villages, hamlets, houses, inhabitants, &c., in the district of Dindigul from 1833 *to* 1835.

Names of the Talooks.	PARTICULARS.	FUSLIES. 1243	1244	1245	
Toddy Coomboo.	Villages	83	83	83	
	Hamlets	395	401	401	484
	Houses	12,870	12,811	12,900	
	Men	17,255	17,318	17,362	
	Women	17,702	17,827	17,891	} 51,473
	Children	15,538	15,975	16,220	
	Ponds	745	743	751	
	Tanks	137	137	137	
	Wells	2888	2906	2918	
Iyempully.	Villages	87	87	87	
	Hamlets	245	243	244	321
	Houses	15,841	16,099	16,023	
	Men	18,985	18,606	18,713	
	Women	20,023	19,178	19,720	} 55,831
	Children	17,912	17,538	17,368	
	Ponds	116	116	115	
	Tanks	81	76	77	
	Wells	2683	2708	2743	
Nelcottah.	Villages	84	84	84	
	Hamlets	366	367	373	457
	Houses	10,396	10,581	10,758	
	Men	14,318	15,507	15,646	
	Women	14,194	15,064	15,090	} 43,895
	Children	10,620	12,786	13,159	
	Ponds	231	224	283	
	Tanks	91	93	94	
	Wells	1603	1620	1639	
Marungapoory.	Villages	173	173	173	
	Hamlets	801	811	811	984
					2246 Total villages and hamlets.
	Houses	17,056	17,559	17,643	
	Men	22,436	23,500	22,956	} 65,861
	Women	21,660	22,336	22,737	
	Children	23,930	20,660	20,168	217,060
	Ponds	1109	1109	1085	2234 Total Ponds.
	Tanks	983	985	975	1283 do. Tanks.
	Wells	3266	3307	3277	10,577 do. Wells.

RAMNAD.

Situation and boundaries.

The large zemindary of Ramnad, which forms the south eastern part of the district of Madura, lies between the parallel of 9° 3″, and 10° 2″ of north latitude, and 78° 0″, and 79° 24″ of east longitude; stretching out in a south easterly direction towards the island of Ramisseram, from which it is separated by the Paumbum passage. It covers an area of upwards of 1,300 square miles, of which about one half is cultivated, the remainder consisting of sandy and waste land, marshes, and low jungle; it is bounded on the north by Shevagungah, on the south and east by the sea, and on the west by the district of Tinnevelly.

Foundation of the Zemindary.

The zemindary was granted to the ancestors of the present Rajah, with the title of Saidcobuddee, for the protection of the pilgrims resorting to the sacred pagoda of Ramisseram. The founder of the family was named Wodya Taven, who it appears exercised authority over a small district covered with jungle, and infested by robbers; on one occasion he escorted a relation of the king of Madura on a visit to the sacred shrine, who in reward for his good offices, procured for him an additional grant of territory, and conferred on him the title of Rajah.

General appearance of the country.

The country is an extensive plain, without a single hill or conspicuous eminence, or even wood of sufficient size to obstruct the view; trees, and those in small numbers, being only found in the vicinity of villages; the country seems ,as far as the unfavourable nature of the soil will permit, to be well cultivated, but vegetation is so entirely dependant on the periodical rains, that with the exception of the wet months, its general appearance is naked and uninteresting. The interior is entirely free from jungle, but the Babool tree abounds in the vicinity of the sea, which with the palmyra and cocoanut tree, forms a complete belt of vegetation along the coast.

Sea Coast.

The southern part of the coast is faced with rugged rocks, which extend for some distance into the sea, rendering the navigation dangerous; and the neck of land which runs towards Ramisseram, is almost entirely composed of sand, covered with a low brushwood, and scanty grass; it terminates abruptly, there being a break or chasm, of about 2,250 yards wide, between the island and the main land, the general direction of which, and the shattered appearance of the bank at both sides, rendering it pretty certain that they must at one time have been connected.

Soil.

The soil in the interior and western talooks, is black cotton ground, and in the eastern parts, for a distance of about 15 miles from the sea, light and sandy; with the assistance however of manure, a large portion is brought under cultivation, and during the wet season tolerable crops of dry grain are obtained. Even the most unfavourable portions of the country are not entirely unproductive, as the valuable chay-plant, from the root of which a beautiful red dye is extracted, grows spontaneously in the sand; and is found in great abundance along the coast, often growing in what appears to be the most sterile spots.

Division of the country, & population.

Ramnad is divided into 17 talooks, the population of which, and the number of villages, are as follows:—

TALOOKS.	Villages.	Males.	Females.	Children.
Ramnad	160	10,447	11,476	11,654
Keelaeaad	53	6137	6554	6596
Chekal	140	3950	4132	3696
Moodacoalatoor	112	2928	3009	2329
Papancolum	114	4607	4936	4573
Camoothi	148	8744	8800	6435
Abramem	185	5845	6000	5816
Vindoni	87	6166	5723	2762
Camencoattay	191	7615	7855	6527
Salygramem	81	5075	5127	4120
Rasingamungalum	78	3274	3284	2190
Arnootamungalum	191	5553	5450	3397
Anoomentagoody	184	5009	5142	4441
Gootaganaud	86	3510	3572	2843
Oroor	107	3533	3431	2715
Cotahpatam	25	877	829	637
Pullimuddhum				
	223	19,094	19,733	19,788
Total	2165	10,2361	10,5053	91,489

Hindoos.

The population in the interior consists chiefly of hindoos, who are generally poor, and engaged in agricultural pursuits; but a few of them are occupied in the manufacture of cotton cloth.

Mahomedans & Lubbays.

In every town there are some mahomedans, most of whom work in iron; the inhabitants of the towns on the coast are principally mahomedans or lubbays, and roman catholic christians, the former amounting to about 27,000, and the latter to 10,000; the lubbays are an active and enterprising race, and were formerly possessed of considerable wealth; they are still comparatively independent, their houses being larger, and having more the appearance of comfort, than those of the hindoos; they are said to be haughty and irascible; but when treated with kindness obliging, communicative and intelligent; they engage in trade both by land and sea, and a few are mechanics. Many of the lubbays are acquainted with arabic, but the tamil is the language universally spoken by all classes.

Native Christians.

The christians are employed as fishermen, and are apparently very poor, their villages consisting of mean huts erected along the sea beach, having usually a small church attached to them in a conspicuous position.

Decline of manufactures.

It seems to be generally admitted, that the people are in worse circumstances than they were 25, or 30 years ago, when numbers were actively engaged in the manufacture of cotton and silk cloths for exportation, as well as for home consumption; the free admission of English cotton cloths, has since seriously injured the commercial and manufacturing part of the community, who are unable to compete with foreign produce; and they are now idle and impoverished, many of them having through necessity become cultivators.

Principal towns.

Ramnad, the capital, is about two and a half miles in circumference, surrounded by a wall and ditch, and defended by numerous small bastions, but the works are now in a ruinous condition, and the ditch nearly filled up.

Fort. The fort was built about 250 years ago, by Magana Ragoonada Saied-budday, who also constructed a large tank near it, on the north side.

Zemindar's palace. The Zemindar's palace, composed of four square buildings of two and three stories high, stands in the centre of the town; it is an ancient structure ornamented in the native style, but going to decay. Adjacent to the palace, is a large and handsome bungalow, which belonged to the late Colonel Martinz, who resided here for many years in command of the garrison and district, near to which is a small Protestant Church. protestant church, and vestry in good repair. The burial place of the Rajahs, containing several granite tombs, is on the opposite side of the tank. A small roman catholic church, near the south-east corner of the fort, and a pagoda in the centre of the town, are the only other objects worthy of notice.

The fort contains about 5,000 inhabitants, chiefly dependants of the Zemindar, the houses are generally built of mud, and thatched; the streets, with one exception, are irregular and narrow, but they are kept tolerably clean.

A large portion of the inhabitants reside outside the walls, on the eastern side near the principal entrance to the fort; they amount to about 5,000, chiefly hindoos, who are engaged in agricultural pursuits, and as grain merchants; and a few occupied in manufacturing coarse cloths; there are two rows of bazars regularly built, with tiled roofs, where a market is held every Wednesday.

Military detachment. Ramnad is garrisoned by a company of native troops, under a European officer; and is the residence of the assistant to the collector of Madura. The sepoys have no separate lines, but occupy houses indis- Place of arms & Hospital. criminately with the inhabitants; the place of arms, and a small substantial building, used as an hospital, are within the fort, and are sufficiently commodious for the detachment.

Dwelling of Europeans.

In the vicinity of the town, in an open sandy plain, are the houses of the European officer, and of the assistant to the collector, with the ruins of several buildings in the vicinity, which formerly belonged to the Commercial Residency. It is a hot station, but the evenings are usually cool, from the influence of the sea breeze, and it has hitherto proved very healthy.

Ramnad stormed in A. D. 1772.

Ramnad is memorable from having been stormed by General Smith in A. D. 1772; and likewise from an affray in the year 1797, in which Lieutenant Clark was killed, when endeavouring to seize the celebrated Poligar chief, Cotabomia naig.

Town of Keelacarney.

Keelacarney is a sea port town situated nine miles south west from the capital, having a population of about 7000 mahomedans, who are engaged in trade; they follow a variety of handicrafts, and manufacture a considerable quantity of long cloths, but both trade and manufactures have lately been on the decline.

There are several mosques and musselmaun tombs in the town; also a roman catholic church, and the ruins of a Dutch factory.

The coast at this place abounds with rugged rocks, which appear when the tide is low.

Town of Deviputtam.

Deviputtam, also a sea port and populous town chiefly inhabited by lubbays, is known by the name of the "nine-stones," from the circumstance of a natural bath being formed by nine rocks in the sea, at some distance from land, which has been held sacred from the most remote antiquity. A visit to this bath is considered necessary by all pilgrims, on their way to Ramisseram. There is a well built choultry here for the convenience of travellers, where alms are bestowed daily.

Village of Davacottah.

Davacottah, a populous village, is situated on the north bank of the Verashelagaur river,

the houses are poor looking, and the streets irregular, narrow and filthy; but notwithstanding its appearance, it is one of the most important places in the district on account of its trade, and the numerous wealthy chetties who reside there; these people live in a mean style, but distribute much charity; they do not salaam to superiors, but make their acknowledgments by rubbing the hand on the belly.

Village of Mootapettah.

Mootapettah, a fishing village situated ten miles south-east of Ramnad, is inhabited by roman catholic christians, who have a church in the centre of the village, the officiating priest being a native of Goa. At a short distance, close on the sea shore, two thatched bungalows have been erected for the convenience of the European residents in the district, which are occasionally resorted to, during the sultry and oppressive months of March and April.

Autuncaray.

Autuncaray, a small sea port, eleven miles east of Ramnad at the mouth of the river Vigay, is inhabited chiefly by fishermen; coasting vessels enter the river at certain seasons of the year, and carry on a trade in rice, and other products of the district; the best tobacco grown in the southern provinces is obtained from this neighbourhood. There is a spacious and substantially built choultry here, which was erected, and liberally endowed by the late Zemindar, where alms are daily distributed to pilgrims, on their way to and from Ramisseram.

Village of Arnootamungalum.

Arnootamungalum, and about a dozen other villages lying north of the Collycurray, and south of the Nunnymuttoo rivers, are inhabited by a peculiar tribe called vellaulers, who according to tradition, established themselves in this locality about 400 years ago; their women are prohibited covering their breasts, and are strictly forbidden to pass the boundary, formed by the two rivers.

These people will not hold any situation under government or other authority, and are employed solely as cultivators, and they

refuse to pay obeisance to any one, further than by rubbing the right hand on the belly.

Town of Purmagoody.

The town of Purmagoody, is situated on the south bank of the Vigay river, 22 miles north-west of the capital; it contains upwards of 1,000 houses, and about 5,000 inhabitants, principally weavers of silk and cotton cloths.

Town of Abramum.

The populous town of Abramum, on the road to Madura, is inhabited by musselmans, chetties, and vellaulers; the two former are engaged in trade, and the latter as cultivators; from the abundant supply of water in this neighbourhood from the Yary, rice is extensively cultivated, two crops being obtained annually.

Verasholen, a village about seven miles north west of Abramum, was formerly the residence of a Rajah, in whose days it was very populous, and many remains of antiquity to be met with, show that it was once a place of some consequence; the present population is inconsiderable, consisting of mahomedans, collaries and marravers.

Rivers.

Numerous streams flow through the zemindary, but few of them are of sufficient magnitude to call for particular notice; their beds are broad and shallow, from the peculiar nature of the country, and their flowing over an almost level surface; during the freshes which occur in October, and November, and occasionally in April, the water is diverted into numerous tanks, and in the hot months, water is always procurable by digging in the beds of rivers; along the banks, of which *pecottahs are erected, for the purposes of irrigation.

The principal streams are the Pambanaur, Veeashelayaur, Munnymootoo, Vigay, Cottaycuraur, Kredamaundthy, and Trimungalum.

Marshes and Tanks.

An extensive back-water, situated in the southern extremity of the zemindary, and extend-

* Wells worked either by bullocks or men

ing over a spaee of ground about 15 miles in eircumference, emits during the hot season a most fœtid smell; and there are likewise numcrous tanks throughout the country.

Roads. There are no made roads, and the tracks are so soft and sandy, that traffic betwixt the coast and towns in the interior, is thereby much impeded.

Climate. The climate though hot, is agreeable at plaees which are within the influence of the sea breeze; the north-east monsoon prevails throughout October, November, and until the middle of December, and the weather is cool and agreeable till February; but March, April and May are hot and disagreeable, particularly in the interior.

Diseases. There are no diseases endemic to the country, which for a number of years past has been singularly free from severe visitations of sickness.—Cholera appeared in the years 1829, 32, 33, and 37, but to a very partial extent. Fever and diarrhœa generally prevail during the wet season, but these diseases are mild and tractable, readily yielding to simple treatment. Ulcers have been common amongst the sepoys, but they do not appear to prevail amongst the permanent residents, to any great extent.

Cholera.

Fever & diarrhœa.

Ulcers.

During the ten years, from 1829 to 1838, out of a detachment averaging 110 in strength stationed at Ramnad, only six deaths, exclusive of cholera, are recorded.

No. 15—*Table exhibiting the number of admissions into hospital and deaths, amongst the native troops at Ramnad, from* 1829 *to* 1838 *inclusive.*

CLASSES	DISEASES. (Aggregate strength 1104.)	Admitted.	Died.	Total admissions from each class.	Total Deaths from each class.	Percentage of sick to strength.	Percentage of deaths to sick treated.
Fevers......	Febris ephemera	54	0	163	4	14 ·764	2 ·454
	,, intermittens..	55	3				
	,, remittens....	2	0				
	,, com. continua...........	52	1				
	*Cholera..........	41	18	41	18	3 ·713	43 ·902
Diseases of the Abdominal viscera......	Diarrhœa..... ..	1	0	30	0	2 ·717	0 ·000
	Dysenteria acuta et chronica	27	0				
	Obstipatio......	2	0				
	Hepatitis.......	0	0	0	0	0 ·000	0 ·000
Diseases of the Lungs.	Catarrhus......	10	1	12	1	1 ·086	8 .333
	Asthma.........	2	0				
Diseases of the Brain.	Apoplexia.......	1	0	3	0	0 ·271	0 ·000
	Amentia.........	1	0				
	Mania...........	1	0				
Eruptive Fevers......	Variola.........	0	0	2	0	0 ·181	0 ·000
	Varicella.......	0	0				
	Rubeola.........	2	0				
Rheumatic affections ..	Rheumat. acutus et chronicus.	91	0	91	0	8 ·242	0 ·000
Venereal affections ..	Syphilis primitiva..........	10	0	12	0	1 ·086	0 ·000
	Gonorrhœa.....	2	0				
Diseases of the eye,..	Morbi oculorum...........	30	0	30	0	2 ·717	0 ·000
Diseases of the skin.	Morbi Cutis.....	12	0	12	0	1 ·086	0 ·000
	Other diseases..	188	1	†188	1	17 ·029	0 ·532
	Total......	584	24	583	24	52 ·902	4 ·109

* Cholera occurred in 1829-32-33 and 1837.

† Including 164 admissions from ulcus, and one death.

Commerce and Manufactures.

The commerce of this zemindary was formerly very extensive, and a commercial resident, with an assistant, were for many years established at Ramnad, for the purpose of procuring cloth for the English market; a large proportion of the inhabitants were manufacturers, and the mahomedans carried on an extensive, and valuable trade in piece goods, with the Eastern islands, and the Persian gulph; but the manufacture and exportation of piece goods, have to a great extent, been superseded, by the

introduction of English cloths. Coarse cloth is however still made in considerable quantity, but chiefly for the use of the country itself.

Imports and Exports. The principal imports are spices, ghee, oil, betelnut, wood, iron, sugar, and pearls; and the exports, chay root, * chanks, salt, saltfish, tobacco, cotton, skins, paddy, and coarse cloth.

Wild animals. There are no wild animals, peculiar to the district; antelopes, and wild hogs are to be met with, but they are by no means numerous.

Chank shell fishery. About one million of chank shells are collected on the coast annually, and forwarded to the Calcutta market; the fishery is rented for about 5,000 rupees per annum.

Cattle. This province is well stocked with cattle as appears from the following statement, but from the scanty pasturage, they are of small size, and in indifferent condition:—

Number of	cows	47,776
do.	bullocks	47,428
do.	calves	21,478
do.	male buffaloes	8,468
do.	female do.	18,472
do.	sheep	2,75,072

* A description of uni valve shell (Species, Dollium) of a pure white colour, which is in great request in Bengal for the manufacture of toe rings and other native ornaments.

ISLAND OF RAMMISSERAM.

Ramisseram its situation.

Ramisseram, or Ramisswaram, an island on the coast of Ramnad, is situated between Ceylon and the continent of India, from which it is separated by a narrow strait, called the Paumbum channel; the town of Ramisseram lies in N. latitude 9° 17″, and E. longitude 79° 21″.

It is generally supposed that this island at one time formed a portion of the continent of India, from which it was detached about the end of the 15th century, by the sea breaking through a chain of rocks which formed the connexion. The abrupt manner in which the coast at point Ravan terminates, its geological formation, which is identical with that of the opposite portion of the main land, and the direction of the ridge across the channel, almost confirm the supposition; and the opinion is further strengthened by the records of the pagoda at Ramisseram, which state, that until the early part of the 15th century, the island was connected with the continent, by a narrow neck of land, and, that the Swamy of Ramisseram, on particular festivals, was carried in procession to a pagoda which is now on the main land.

During the reign of Achoodapah naig, Rajah of Madura, about the year 1480, a small breach was made in the isthmus, by a violent storm, but as there was no great depth of water, it was passable on foot, till the time of his successor Vissoovarada naig, when the breach was much enlarged by another storm; and since that period every succeeding gale has assisted in breaking down the remaining connexion; the destruction of which, the inhabitants state, is still going forward, every 15 or 20 years making a sensible alteration in its appearance and extent.

History of Rammisseram. The name and history of Rammisseram are intimately connected with hindoo mythology, and it is considered a place of peculiar sanctity. According to traditionary accounts, Ravan king of Lunka (Ceylon) stole away the wife of Ram, or Ramma, (an incarnation of Vishnoo,) to recover whom, Ram collected an army of monkeys under the great Hun-nu-man ; this army, under their divine leader, made a bridge of rocks from the continent to Ceylon, the remains of which is called Adam's bridge. The way being thus prepared they invaded the island, defeated the king, and recovered the stolen lady. Ramma on his return from Ceylon was observed to have two shadows, a peculiarity said only to attend sinners of the deepest die ; but on his arrival at Gundamanthrun, the original name of the promontory which now forms the island, the additional shadow disappeared, and he was informed by an attending priest, that he stood on holy ground, and that in consequence his sins were forgiven. Here Ramma performed ablutions, and solemnized the event by festivities ; he at the same time sent to Benares for a lingum, and fashioned another with his own hands, out of a little sand, both of which are now carefully preserved in the sanctuary of the temple. From that period the island has been dedicated to him, and called Rammisseram ; and in the expectation of reaping worldly advantages, which have been liberally promised, and immediate happiness after death, said to be insured to all who visit the sacred shrine, and attend to the ceremonies enjoined, pilgrims in vast numbers resort to it from remote parts of India.

Extent and general appearance. The island, which is of a very irregular shape, is about 11 miles in length, by 6 in breadth ; at the south east extremity there is a narrow slip of sand, twelve miles in length, stretching towards Ceylon, nearly joining the chain of sand banks, which separate the gulf of Mannar, from Paulk's bay, and known as Adam's bridge. This bank is gradually increasing in length, and indicates the manner in which the island, and the adjacent portion of the peninsula, have been formed ; the sand shells

and debris of the coast, thrown up by the violence of the monsoons, being deposited where the opposing currents, from the east and west meet; these materials gradually become consolidated, forming horizontal strata of sand stone, resting on a bed of gravel.

The extreme point of this neck of sand, at the meeting of the waters, is the spot where Ramma was absolved of his sins, and where devotees perform their ablutions before visiting the pagoda, and here the ashes of the dead, usually of persons of distinction, brought from remote parts of India, are committed to the sea.

The surface of the island is low, hillocks of sand raised by the wind, being formed here and there, with small valleys between them, occasionally containing stagnant water. A considerable portion of the land is covered with Babool jungle, and on the south-west, and north-west sides, cocoanut and palmyra trees abound.

Soil. The only soil to be met with, is on a small space about two miles square, near the centre of the island, except where fallen leaves have in some places formed a scanty mould, on which a coarse stunted grass grows; in the vicinity of the villages also, by the use of manure, small tracts of land have been brought under cultivation.

Wells and Tanks. Rammisseram is abundantly supplied with excellent water, from numerous wells and small tanks; and wells are usually attached to the choultries, erected for the convenience of pilgrims.

Lakes Marshes &c. In the vicinity of the town of Rammisseram, there is a fresh water lake about three miles in circumference, which is filled by the rains; and an extensive salt marsh is formed by the sea breaking over the sand banks during the N. E. monsoon, on the south side of the island, about three miles from Rammisseram; and near Paumbum there is also a narrow back-water, about two miles in length.

Climate. From the peculiar situation of the island it enjoys the benefit of both monsoons, and with the exception of two months in the year, March and September, the weather is cool and pleasant, the thermometer ranging from 75°, to 85°.

The north-east monsoon sets in about the 20th of October, and ends about the same date in January; during February and March, there are alternate land and sea breezes, and southerly winds in April and May. The S. W. monsoon sets in early in June, and lasts till the middle of August, from which period till the middle of October, the winds are light and variable.

The marshes above mentioned, appear to exert a deleterious influence upon the health of the inhabitants on the eastern side of the island; severe fevers being occasionally met with at Rammisseram, accompanied by glandular enlargements, whilst the inhabitants of Paumbum are perfectly healthy. In 1839, 300 people fell victims to the epidemic fever at Rammisseram, while at Paumbum the disease was comparatively mild and tractable, and no death occurred from it, either amongst the sepoys stationed there, or the convicts employed on the work of opening the channel.

Epidemic Fever.

Population. But for the sacred character which the island has obtained, it is very probable that it would have remained uninhabited, except perhaps by a few fishermen. No manufactures of any kind are carried on, and it is entirely dependant upon other places for its supply of grain. The money circulated by a large though fluctuating population, and the necessities of a numerous, and wealthy body of brahmins, have however induced many persons of inferior castes, to settle on this sterile spot, and bring under partial cultivation, a soil which in other circumstances would have remained an arid waste, and Rammisseram has in consequence become the residence of many wealthy natives, and the centre of a considerable traffic.

The fixed population is estimated at 4,288, viz.

Brahmins	811
Lubbays	620
Native Christians	372
Other Castes	2,485
Total	4,288

Pilgrims. The number of pilgrims who annually visit the island seldom exceeds 30,000; and it appears from the records of the pagoda, that they are not only of a less respectable class, but that their numbers have of late years much decreased; in former days persons of the highest rank were amongst the pilgrims, which is now rarely the case.

Brahmins. The brahmins are chiefly supported from the revenue of the pagoda, and by fees and presents received from hindoo visitors; they make a practice, prior to each of the principal festivals, of going some distance to meet wealthy pilgrims, whom they take under their protection, conduct them to the prescribed places of devotion, and instruct them in their ablutions, prayers and offerings; they also receive them into their houses during their stay, for which they are always well remunerated.

Lubbays. The lubbays are principally engaged as fishermen, pilots and boatmen at Paumbum, and a number of them are also employed as divers, at the works for clearing the channel, now carrying on; but a few of the more respectable are grain merchants.

Native Christians. The native christians, who are roman catholics, are chiefly fishermen and pearl divers, they are a poor and wretched race.

Schools. There are 10 schools on the island, with about 160 pupils, between 50 and 60 of whom are brahmins, from 30 to 40 lubbays, the remainder being of various other castes. Tamil is the chief language taught at these schools; but the lubbay boys learn to read the Koran, and to repeat

prayers in arabic; and a few of the brahmins are instructed in sanscrit.

Tamil is the language spoken on the island, but as pilgrims frequent it from distant parts of India, many of the brahmins are able to converse with them in various other tongues.

Domestic Animals. The domestic animals are but few, as shown by the following statement.

Number of	bullocks	48
do.	cows	930
do.	female buffaloes	209
do.	male do.	10
do.	sheep	414

The cattle are extremely diminutive in size, but are well formed and hardy.

Tattoos or ponies are bred in considerable numbers, but from want of good pasturage, they are weak and ill-grown; they are used in large droves for carrying grain, and are also hired by the pilgrims.

Hares, and Partridges. The island abounds with hares, and partridges.

Vegetables and fruits. The gardens yield a tolerable supply of country vegetables, and a few plantains; orange, lime, citron and pomegranate trees, are also to be met with.

Betel, oilnut, cumboo, raghee and cotton are also cultivated to a small extent; and the chay plant grows spontaneously along the coast.

Commerce. A traffic is carried on in rice, cloths, and oil, principally for the use of the inhabitants; and some of the natives of Paumbum possess shares in vessels, and trade with the principal ports, on each side of the Indian peninsula, and with Ceylon, in grain, timber, oil and iron.

Coarse cloth for the use of the inhabitants, is made to a limited extent.

Town of Rammisseram. The town of Rammisseram is situated on the eastern side of the island, close to the beach, it contains nearly 1000 houses, most of which are well built, and many of them terraced, and has some good streets running at right angles with the pagoda; the inhabitants are chiefly, the attendants on the pagoda. The management of the affairs of the pagoda, is in the hands of the *pundarem,* as he is called, who is of the soodra caste, doomed to celibacy, and is descended from a family who have possessed the office for nearly a century. The pundarem has the right of naming his successor, his selection being always confirmed by the zemindar of Ramnad, and as the appointment is considered one of high dignity, he generally nominates one of his nearest unmarried relatives.

Pagoda. The Pagoda, the great object of attraction, stands nearly at the east end of the town, and is far less imposing in appearance, than either that of Madura or Chelumbrum; indeed it owes its celebrity chiefly to its having been erected on a spot of peculiar sanctity, connected with the legend of Ramah's visit, and from its possessing the two lingums already mentioned; these emblems of Siva, and objects of adoration to his followers, are carefully preserved in the temple, and are daily washed with water from the sacred Ganges.

The pagoda forms an enclosed quadrangle, the exterior walls of which, running north and south, are 657 feet in length, the east and west sides being nearly 1000 feet; there are three entrances, and it has a tower, or goperum, which is about 100 feet high, covered with the usual mythological figures; the door-ways are 19 feet high, each side consisting of a single stone; on passing through one of the door-ways a colonnade of magnificent proportions is seen, and is the only object of interest to the European visitor; it is perhaps one of the most remarkable structures of the kind in existence, and the effect produced, on first entering the building is very striking from its vast size, the innumerable columns

which support the roof, and the massy and enduring nature of the materials. Its length from north to south, is 353 feet, and from east to west, 671 feet, by 17 in breadth; the ceiling is composed of large slabs of granite, supported by carved pillars, of the same material, raised on each side on a platform 5 feet high, the pillars are upwards of 12 feet in height, and most of them formed of single blocks of stone. As no granite is found on the island, the labour of cutting and transporting these immense masses a distance of nearly 40 miles, from whence it is said they have been brought, must have been very great.

In the colonnade leading from the door-ways to the interior of the temple, are figures representing the Rajah of Ramnad, by whom it was built, with his family and ministers; he was the ancestor of the present Ranee.

Immense sums were formerly lavished in presents to the temple, both in money and jewels, the latter alone, being said to be worth several lacs of *pagodas; and, for facilitating the pilgrims on their journey, choultries where alms are daily bestowed, are erected all along the coast of Ramnad, and the road from Rammisseram to Paumbum, a distance of eight miles, is flagged, a choultry being erected at every mile, with wells and numerous small pagodas.

The annual revenue is upwards of forty thousand rupees, derived principally from pagoda lands, and a part from donations.

About a mile and a half north of Rammisseram there is a small hill, about 30 feet in height open on all sides, on which a building consisting of two stories, has been erected; from the upper story is an extensive view of the whole island, with a part of Adam's bridge; and should the trade increase, consequent upon steamers and other vessels, being enabled to pass through the channel, this spot would be a good situation

* A coin equal to 3½ Rupees.

for a light house; at present from the land being low, mariners have only their soundings to guide them in approaching the coast.

Paumbum, town of.

Paumbum is a small mercantile town, on the western extremity of the island, which derives its name from the snake-like channel, which separates the island from the mainland; it contains about 200 houses, several of which have tiled roofs, they are built either of stone or mud, and the streets are narrow and irregular.

The population chiefly consists of lubbays, who are an industrious people, actively engaged either as pilots, boatmen, or divers, and a few as merchants.

Detachment of Sappers, and Convicts.

A European officer with a detachment of about 100 sappers and miners, and a gang of 150 convicts, are stationed here; the camp followers amounting to about 300, and as the coasting trade is on the increase there has been a considerable influx of money of late, causing a visible improvement in the condition of the inhabitants.

Sepoys lines.

The officer commanding the detachment has a comfortable bungalow, situated in a grove of trees within 30 yards of the sea; and the sergeant and apothecary have suitable quarters a little to the rear; the sepoys are hutted in a cocoanut tope about a couple of hundred yards from the beach; the situation of their lines is low, confined, and being annually flooded during the north-east monsoon, must consequently be damp; there is however no other eligible ground within a less distance than half a mile.

Healthiness of Paumbum.

The medical returns of the detachment, including also those of the convicts, prove that it is a particularly healthy spot, the complaints from which they have hitherto suffered, being chiefly caused by accidental circumstances, and by the nature of the works on which they have been employed.

Madras Lith: Press

B.C. Regel, del.

The following return shows the diseases which have prevailed during three years; in which period only one death has occurred.

Statement of the sick of the detachment of Sappers and Miners, and Convicts.

		Strength.	DISEASES. Febris Ephemera.	,, Int Quotid.	,, Remittens.	,, Continua.	Ophthalmia Acute.	Cynanche.	Pneumonia.	Hepatitis Acuta.	Cystitis.	Rheumatism Acutus.	Hæmorrhois.	Catarrhus.	Dysenteria Acuta.	Apoplexia.	Dyspepsia.	Tetanus.	Colica.	Diarrhœa.	Syphilis Primitiva.	Icterus.	Fractura.	Other Diseases.	Total treated.	Total Cured.	Died.
Detachment Sappers and Miners.	1837	97	4	1	7	16	13	1	0	1	0	13	0	9	6	0	3	0	18	9	2	0	0	122	226	226	0
	1838	95	0	11	0	27	10	1	0	0	0	16	1	11	2	0	7	0	2	4	3	2	0	74	171	171	0
	1839	96	0	77	1	28	17	1	0	0	1	22	3	2	5	1	12	0	4	6	3	0	0	73	256	255	1
Convicts.	1837	49	12	1	0	29	9	1	0	0	0	17	0	18	6	0	14	0	27	30	1	0	0	158	323	323	0
	1838	129	0	11	0	68	14	5	0	0	0	26	6	1	10	0	10	0	5	27	1	0	0	131	315	315	0
	1839	142	0	98	1	40	9	0	1	0	0	16	6	2	9	0	3	1	14	16	2	2	1	116	337	337	0

Opening of the channel.

The circumstance which at present gives interest to Paumbum, is the opening of a channel for vessels between it and the mainland, with a view of improving the coasting trade, and affording a free communication with the western ports, without the necessity of circumnavigating Ceylon.

Dhoneys and small vessels have, for the last 40 or 50 years, been enabled to cross the bar, after disembarking their cargoes, though with considerable difficulty and danger; the obstacles being so numerous, that they generally

took several days in working through. In 1828 and 29, the subjeet was brought to the notiee of Government, and a eommittee of engineer offieers under lieutenant colonel Sim, were directed to survey the channel, and report on the praetieability of opening a passage through it, either at Paumbum, or through Adam's bridge; a small detaehment of pioneers, was at the same time employed in removing some of the prineipal obstacles, in the ehannel; which was then made 40 feet wide, and between five and six feet deep at spring tides; but was still very tortuous, and vessels in passing through, were obliged to use three or four warps, as in many places it formed an angle with the eurrent.

In 1837 the works were resumed, at the recommendation, and under the direction of eolonel Monteith, the Chief Engineer, and sinee that period have been earried on every season, and will it is supposed be persevered in, till vessels drawing from 10 to 12 feet water, ean pass through with safety; but even now small sized steam vessels make the passage.

The ehannel, a plan of which is given, is at present about 1,200 yards in lėngth, 100 feet wide, and has a depth of water, of between eight and nine feet at spring tides.

This undertaking has already begun to exert an influenee upon eommercial industry; and when complete will be a work of great public benefit.

Coasting trade, amouut of Tonnage.

The inerease of trade whieh has already resulted is shown in the following statement.

	1837.	1838.	1839.
Amount of tonnage passed through the channel.	25,289.	50,005.	65,326.

Anehorage and eustom duties are levied by Government on all vessels, but pilotage is paid to a body of lubbays, who hold their situations by *Merassee;* and a ferry is kept up by the zemindar, for the eonvenienee of travellers.

TANJORE.

Situation Boundaries and Extent.

The province of Tanjore is a very fertile, and populous country, in the southern Carnatic, lying principally between the 10th and 11th degrees of north latitude, and the 78th and 79th degrees of east longitude; it is bounded on the east and south by the sea, on the west by Trichinopoly, and the country of the Tondiman Rajah, and on the north by the Coleroon river. Its greatest extent from east to west, is 75 miles, and from north to south 115, forming an area of 3,900 square miles with a population estimated at 972,902 souls. The number of towns and villages

Chief Towns.

is estimated at upwards of 6,000. Of these, the chief inland towns are Tanjore, Myaverum, Combaconum, Mannargoody, and Trevalore; and the chief sea ports, Negapatam, Nagore, Karrical belonging to the French, Tranquebar a Danish settlement, and Davicottah at the northern confines of the district. The surface of the country is a low, level, and highly cultivated plain, devoid of mountains, hills, or any considerable elevations, and covered nearly throughout its whole extent with paddy fields, interspersed with topes of cocoanut trees. The province is plen-

Rivers.

tifully supplied with water from branches of the river Cauvery, throughout its whole extent. The three principal of which are, the Vennar, Codamoortee, and Verashalen, on its southern bank; of these, the former is the most important, and supplies all the southern part of the district, it gives off several large branches, and its waters are entirely dispersed before it reaches the sea; the others terminate in open mouths on the coast. In the months of March, April and May, all the streams except the larger ones become dried up, and the waters of these are then sluggish, and nearly stagnant The Cauvery is twice filled during the year; first in June and July, by the S. W. monsoon, when it receives an immense influx of water from the mountainous regions, in which its

tributary streams take their origin; and again in November, by the N. E. monsoon. To regulate the distribution of water, and prevent inundations, *annicuts, sluices and embankments, have been formed near the island of Seringham. By these means an abundant, and equable supply of water is rendered available for the lands in Tanjore, and a tract of country, which would have otherwise been a barren sandy plain, has become the most fertile, rich and populous district in the Madras presidency.

Soil. The soil is generally dry and sandy, but at several places along the coast, there are extensive alluvial marshy surfaces, which during the monsoon become covered with sea water, from which salt is deposited in the dry season by evaporation; the two principal salt marshes are situated near Point Calymere, and yield a considerable revenue to government.

Climate. The climate is very healthy, and entirely free from miasmatic exhalations, the temperature being much the same as in other parts of the Carnatic, till the month of June, when the rivers are filled, and the heat thereby becomes moderated. From February, till the middle of October, westerly or land winds prevail, which from passing over extensive, arid and sandy plains, become hot and scorching, particularly in March, April and May, which are consequently the hottest months in the year, and those in which there is the least diurnal variation of temperature; at this time the sea breeze, which sets in daily about one o'clock P. M., greatly moderates the heat on the coast, and at places within its influence.

The inhabitants are very healthy, and enjoy a great immunity from visceral diseases of all kinds, and until the commencement of the monsoons, the coast is well adapted as a place of resort for convalescents, on account of its equable and moderate temperature, together with the refreshing coolness of the sea breeze. Point Calymere salubrity of. Point Calymere is much famed for the salubrity and coolness of its cli-

* Dams running diagonally across a stream.

mate, during the hot months, being situated on the coast about 28 miles south of Negapatam, at a point where it bends, and takes a due westerly direction for upwards of 30 miles, before it again runs south. The coast at Point Calymere forms a considerable promontory, having the sea on both sides, where the south west is no longer a land wind, as on other parts of the coast, but becomes a pleasant sea breeze; the place is therefore an agreeable retreat, during the hot months in the interior.

The N. E. monsoon commences about the middle of October, when the wind veers round to that quarter, and a great fall in the temperature takes place; the wind blows obliquely across the bay of Bengal, and is cool, strong and gusty; the sky is generally obscured by dark lowering clouds, and frequent heavy falls of rain take place, occasionally accompanied by vivid flashes of lightning, and loud peals of thunder; the mornings are cold, raw and hazy, the atmosphere being loaded wtth moisture; the natives seem to suffer most at this time, slight cases of fever, colds and catarrhs, being very common; and now and then smart cases of dysentery are seen. During the monsoon in 1836, although rain was abundant on the coast, it did not extend to any distance in the interior, where a great scarcity was experienced from partial failure of the rice crops.

Agricultural productions.

With regard to agriculture, it may be observed that rice is the grain chiefly cultivated, the whole surface of the district being nearly one continued succession of paddy fields; in all those places, to which remote branches of the rivers already enumerated do not penetrate, artificial channels leading from them, are formed for the purposes of irrigation; and in consequence of their being filled by the south-west monsoon, through the medium of the Cauvery, as well as by that from the N. E., the lands afford two or three successive crops annually. Small quantities of cotton, and a coarse kind of tobacco, are cultivated in the southern parts of the district; a good deal of the latter is con-

sumed by the natives, in chewing. Dry grains are but little grown; the following however are to be found, gingely seed, natcheny, panicum italicum, and holcus spicatus, all of which are occasionally used by the natives, made into cakes. The following leguminous plants are also cultivated, viz. oolandoo, dholl, putchapiroo, mochacottah, and Bengal and Madras gram. The castor oil plant, and the lamp oil tree, grow in abundance, as do also the coriander and cummin plants; the latter being much used by the natives in curries, and other dishes. A considerable quantity of indigo is reared by the natives for dyeing piece goods; all kinds of garden produce thrive well, as onions, garlic, chillies, brinjal, cucumbers, melons, pumpkins, betel leaf. fennel &c.; and fruit is good and plentiful; there are several large gardens in the neighbourhood of Myaverum, in which fruit trees of all kinds are cultivated, and attain great perfection.

Roads. There are tolerably good roads between the principal towns and villages, which are at all times passable, being considerably raised above the level of the surrounding plain.

Town of Tanjore. The town of Tanjore, the capital of the district, and the residence of the Rajah, whose territory extends to some distance round, contains a population of 80,000 souls, and is situated in an extensive flat plain, about 45 miles from the sea. The fort which is about 4 miles in circumference, is surrounded by a lofty fortified wall, and a ditch which is in some parts dry, and in others half full of stagnant water. The streets within the fort are irregularly built, and there are various alleys, and courts in every direction, without regard to arrangement; a wide space has however been left, between the ramparts and the houses; it contains also numerous pagodas, elevated considerably above the surrounding buildings. The houses of the respectable portion of the inhabitants are substantially built of brick and chunam, and in many cases are tastefully decorated; those of the poor, are built of mud, (which from the tenacious quality of the soil, is

well adapted for the purpose) and tiled; the villages outside the fort, are with but few exceptions built of mud, and thatched, the streets being narrow and irregular. A free communication exists between Tanjore, and the neighbouring towns of Trichinopoly, Combaconum, and Negapatam, by means of good roads.

Rivers. The small rivers in the neighbourhood are branches of the Cauvery, with the exception of the Vennar, and are sufficient for the purposes of irrigation.

There are no mountains in the vicinity of Tanjore, but to the west and south the land rises considerably, and the face of the country becomes quite changed, the soil being gravelly, and dry grains only are grown, many parts are however quite uncultivated, and a considerable space is set apart by the Rajah, as a preserve for game, which is covered only by brush-wood; the soil at this part is highly impregnated with iron. The few tanks in the neighbourhood are generally well filled from the rivers; sluices being made to allow a free passage for the water. The country to the north and east is a continued flat, under rice cultivation, several miles in extent; the ryots depend upon the S. W. monsoon for the irrigation of the first crop of grain, water being conveyed for that purpose by branches from the Cauvery, by means of which the country is in a manner inundated, the N. E. monsoon supplying that requisite for the second crop.

There is no jungle within ten miles of Tanjore, the nearest being at Senjeputty to the west, and Poondy to the south east.

Water. Well water is that principally used by the inhabitants, being considered more wholesome than the water from the rivers or tanks; in many of the latter, it is quite red from the presence of iron, and unfit even for culinary purposes.

The people appear generally speaking, to enjoy excellent health, and to attain a great age; mild fevers both of a syno-

chus and intermittent character, occasionally come under notice, but they are subdued without difficulty, and are seldom complicated with organic disease; these complaints are most frequent during the prevalence of the north east monsoon, from exposure to cold winds.

Cholera has not been epidemic at Tanjore since 1831; before that time it occasionally appeared with great severity, and numbers fell victims to it; and no other disease of an epidemic character, has been known at this place, within the memory of the oldest inhabitant, and all bear testimony to the extreme salubrity of the place; it is held in such high reputation by the natives, as to be the resort of many, who having obtained a competency make choice of it as a favored spot, when they may spend the evening of their days. Animals are also healthy, none appearing to suffer from any thing like endemic maladies, and the native residents attribute this peculiar exemption from disease, both among themselves and the cattle, to the extreme purity of the water in the vincity of the town.

Food. Rice is the food principally in use among the natives, and its cultivation is so general in the district, and its price so much lower than elsewhere, that it is within the reach of all; some however of the poorer classes, in time of scarcity, make use of the grain called cumboo.

Trades. A great variety of trades are carried on at Tanjore, the principal of which are manufactures of silks, muslins and cottons.

The sepoys' barracks are placed on an open, dry and slightly elevated piece of ground, about a mile south-east of the fort. It consists of a building 30 feet in length, and 18 in breadth, substantially built of brick and chunam, and covered with tiles.

There is no public hospital at the station, but a part of the assistant surgeon's premises, consisting of two small rooms, is appropriated for that purpose, one room is used as a dispensary, and the other is occupied by the few sick sepoys of the native detachment stationed at Tanjore.

The following register shews the mean thermometric range for one year, commencing in March 1835.

Monthly mean of the Thermometer in the shade at Tanjore, from March 1835, *to February* 1836.

1835.	6 A. M.	12 M.	6 P. M.	REMARKS.
March.	79½	86 2-3rd	85⅓	No rain, the weather getting much warmer during the day, but the nights still pleasantly cool.
April.	82	86 2-3rd	84½	Unusually heavy rain about the beginning of the month, which cooled the air very much, and kept the hot weather off for some time.
May.	87⅓	91½	88	Much warmer than last month, but occasional showers of rain have fallen, and moderated the heat very much.
June.	87	90 2-3rd	89	Heavy rain at the commencement of the month; towards the end there were also some showers; wind occasionally from the S. W., but altogether the weather has been pleasant.
July.	82 2-3rd	91⅙	87	Cloudy and cool weather, occasionally showers.
August.	81	88⅓	87	Clear weather with heavy showers, and thunder storms
September.	81½	85	84¾	Close and sultry evenings, days clear towards the end of the month, heavy showers and thunder.
October.	77	84½	82½	Clear days, nights cloudy, with slight rain.
November.	74 2-3rd	75	74	Clear days until 9th when rains began, nights rainy, usually wet, or heavy dews.
December.	72	75	74	Clear days, cloudy nights with rain.
1836.				
January.	71	77	76 2-3rd	Clear cool days, light dew no rain.
,, February.	74	83 2-3rd	82	Cloudy throughout the month, rain on the 12th, heavy dews.

COMBACONUM.

General description of the district.

The district of Combaconum, situated in the richest part of the Tanjore province, presents quite the appearance of a garden; the rivers Coleroon and Cauvery, with their branches, which intersect the country in all directions, contributing much both to its beauty and fertility. The district extends about 20 miles east and west; and 30 miles north and south; approaching in some parts, to within ten or fifteen miles of the sea. It forms a rich alluvial plain throughout its whole extent; paddy fields occupying by far the largest portion of the land, which is generally under cultivation about eight months in the year, and yields two crops of grain; the other parts of the country are under plantations of cocoanut and betel trees, plantains &c.; and dry grains, such as raggy, cholum and gram, are likewise partially cultivated.

Rivers and streams.

The rivers and streams which are very numerous, yield an abundance of water during six or eight months, from July, till January or February, the whole country then assuming a most verdant aspect. An annicut having been lately erected across the Coleroon, about 12 miles N. E. of the town of Combaconum, a considerable body of water has been made to pass from that river, into the Cauvery, whereby a sufficient supply is now available, to enable the ryots to carry on their cultivation, at all seasons of the year.

Climate.

For climate, see general description of Tanjore.

Exemption from disease.

No epidemic, or any other serious disease, has been known in this district for many years past; in 1819, cholera and small pox made considerable havoc amongst the natives, and occasional severe visitations of disease, are spoken of as having occurred previous to that

period. From May till October is the most healthy period of the year, as during the other months cases of cholera, small pox, fever, diarrhœa and dysentery, occur from time to time.

Vaccination its utility and effects.

Vaccination has been carefully kept up, two thirds at least of the children having undergone that operation, and for the last six or seven years, an anxious desire has been evinced by all classes of the natives, to have their families vaccinated, thus accounting for the comparative exemption from small pox.

Population villages &c.

There are said to be 400 villages within the range of this zillah, all amply supplied with tanks, and wells of good water. The population in 1826, amounted to about 95,000 souls; and in 1837, it had increased to 1,15,000, of these 58,400 were males, and 56,600 females.

The inhabitants live chiefly on rice, eaten with curry, fish, or butter milk, they also make use of mutton and fowls occasionally; they are industrious, sober and cleanly, and an excellent magisterial superintendence preserves as much order as can well be expected.

Combaconum.

The town of Combaconum, in which is situated the jail, hospital, and other public buildings, has several wide and airy streets, and extends about two miles in length, from N. to S., and one mile in breadth, from E. to W., being distant 30 miles from the sea; like the surrounding country it is extremely flat and low; the Cauvery and Asillar rivers approach close to the suburbs.

Distance from the sea.

Houses.

The houses are built in the usual native manner, and in some of the principal streets they have upper stories; the public bazaar forms a long and tolerably wide street, and is well stocked with provisions of all kinds; and being a place of extensive traffic, and of great resort for religious purposes, Combaconum is much frequented by strangers from all parts of southern India. The chief roads are,

Bazaar.

one from Madras, and another from the sea coast, which run through the town.

According to a census taken in 1826, the population of the town amounted to 24,900, viz. male adults 9,360, female adults 8,855, male children 3,750, female children 2,935, and in 1837, it was found to have increased to fully 30,000; there are 2,953 tiled, and 3,981 thatched houses in the town, most of these with upper stories, being of the former description.

There are several very celebrated pagodas at this place, and brahmins consequently form a large part of the community, they live entirely on the revenue derived from the pagodas. Weavers are also numerous, and a very industrious though poor class of the inhabitants. Ryots, and labourers make up the remainder of the population; and but few mendicants are to be seen.

The few Europeans located here, enjoy excellent health, their houses are on slightly elevated ground, and well situated.

Jail, Hospital &c.

The court house, a large commodious building, the jail, and hospital, distant from each other about one hundred yards, are erected on a sandy piece of ground near the river, being the most eligible site in the vicinity; the jail and hospital are contained within the same enclosure, being separated by a partition wall, which divides the prisoners' cells from the hospital, and sepoy's guard rooms; the space occupied by the hospital is 182 feet, by 78; and that by the cells 182 feet square, a communication exists between the two portions of the building, by means of a gate-way in the partition wall; the outer wall which surrounds the whole, is about 15 feet in height.

The hospital is substantially built, has a tiled roof, and brick flooring, and consists of five wards, one 36 feet by 16, the others 16 feet square; it is well ventilated by doors and

windows, but unprovided with verandahs; one of the apartments is used as a surgery and dispensary. Besides the guard room, a cooking shed and well, the civil prisoners' cells, the necessary, and a small building used for cleaning rice, are in the same enclosure with the hospital.

The division for convicted prisoners, and those waiting for trial, consists of nine cells, two cooking sheds, and two necessaries; the largest sized cells are about 30 feet in length, by 12 in breadth, the others average from 12 to 24 feet in length, and 12 in breadth, the whole being eight feet in height, they are well built, tiled, and have brick floors. There are five wells within the enclosure, which furnish an ample supply of good water at all seasons. Every attention is paid both to the cleanliness of the jail, and its inmates, but diseases of a severe character, such as fevers, diarrhœa and dysentery have of late prevailed, attributable to the crowded state of the building, there having been frequently from four to five hundred, confined in a space adapted to accommodate only about 300; and in 1837, they suffered from a severe visitation of small pox, which spread to a considerable extent, from the circumstance just mentioned.

Sepoys lines. The sepoys huts, about 70 or 80 in number, are situated immediately on the bank of the river, near the jail and court house; the men and their families, are generally very healthy.

One of the wards of the jail hospital is appropriated for the reception of sick sepoys. See appendix, under the head Tanjore, for table of disease.

The following tables No. 16 and 17, exhibit the nature and amount of disease and mortality, which have occurred amongst the inmates of the jail, during the ten years from 1829, to 1838, inclusive; they also exhibit the diseases classified, and point out the per centage of sick to strength, and of deaths to sick treated.

JAIL OF COMBACONUM.

No. 16—*Table exhibiting the Number of Admissions and Deaths of the Convicted Prisoners, from each class of Disease, for* 10 *years.*

CLASSES	DISEASES.	From 1829 to 1838. Aggregate strength 1,060. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions & deaths from each class of disease. 1st Half. Ad.	Dd.	2nd Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Average annual per centage of sick to strength.	Average annual per centage of deaths to sick.
Fevers......	Febris ephemera	8	0	2	0								
	,, intermit. quot	134	11	202	9								
	,, tertiana......	10	1	2	0	170	12	244	13	414	25	39 ·056	6 ·053
	,, remitt........	9	0	21	3								
	,, continua.....	9	0	17	1								
	Cholera........	0	0	0	0	0	0	0	0	0	0	0 ·000	0 ·000
Diseases of the Abdominal viseera.	Diarrhœa......	124	23	173	23								
	Dysenteria acuta et chronica.	28	5	51	10	157	28	229	33	386	61	36 ·415	15 ·803
	Obstipatio......	5	0	5	0								
	Hepatitis acuta.	2	0	0	0	2	0	0	0	2	0	0 ·188	0 ·000
Diseases of the Lungs.	Catarrhus......	13	0	5	0								
	Asthma........	3	0	1	1	17	1	9	3	26	4	2 ·452	15 ·384
	Pneumonia.....	1	1	3	2								
	Dyspnœa.......	0	0	0	0								
Diseases of the Brain.	Apoplexia......	0	0	1	1								
	Epilepsia.......	0	0	3	1	1	1	10	3	11	4	1 ·037	36 ·363
	Paralysis.......	1	1	4	1								
	Mania.........	0	0	2	0								
Eruptive Fevers......	Variola.........	8	2	3	0								
	Varicella.......	19	0	33	0	27	2	36	0	63	2	5 ·943	3 ·174
	Erysipelas......	0	0	0	0								
Rheumatic affections.	Rheumat. acutus et chronicus..	42	1	39	2	42	1	39	2	81	3	7 ·641	3 ·703
Dropsies...	Anasarca.......	14	6	12	5	15	7	13	5	28	12	2 ·641	42 ·857
	Ascites.........	1	1	1	0								
Venereal affections..	Syphilis primitiva..........	7	0	8	0	8	0	11	0	19	0	1 ·792	0 ·000
	Hernia humoralis...........	1	0	3	0								
Specific diseases.	Atrophia........	1	0	3	0								
	Lepra..........	0	0	2	1	8	0	6	1	14	1	1 ·320	7 ·142
	Dracunculus. ..	7	0	1	0								
Diseases of the eye.	Morbi oculorum.........	8	0	10	0	8	0	10	0	18	0	1 ·698	0 ·000
Diseases of the skin.	Morbi cutis....	64	2	40	0	64	2	40	0	104	2	9 ·811	1 ·923
	Other diseases..	351	5	339	4	351	5	339	4	690	9	65 ·094	1 ·304
	Total....	870	59	986	64	870	59	986	64	1856	123	175 ·094	6 ·630

JAIL OF COMBACONUM.

No. 17—*Table exhibiting the number of admissions and deaths of the Prisoners under Trial, from each class of disease, for* 10 *years.*

CLASSES	DISEASES.	From 1829 to 1838. Aggregate strength 2,418. 1st Half. Ad.	Dd.	2nd Half. Ad.	Dd.	Admissions & deaths from each class of disease. 1st Half. Ad.	Dd.	2nd Half. Ad.	Dd.	Total admissions from each class.	Total Deaths from each class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
Fevers......	Febris ephemera	0	0	7	0								
	,, intermit. quot	57	10	139	7								
	,, tertian.......	9	0	2	0	111	13	166	7	277	20	11·455	7·220
	,, remittens....	8	3	15	0								
	,, continua.....	1	0	3	0								
	Cholera.........	3	3	3	1	3	3	3	1	6	4	0·248	66·666
Diseases of the Abdominal viscera......	Diarrhœa..	88	19	150	24								
	Dysenteria acuta et chronica.	12	3	62	8	106	22	216	32	322	54	13·317	16·363
	Obstipatio......	6	0	4	0								
	Hepatitis.......	1	1	0	0	1	1	0	0	1	1	0·041	100·000
Diseases of the Lungs	Pneumonia.....	3	1	1	1								
	Dyspnœa	0	0	1	1	3	1	2	2	5	3	0·206	60·000
Do. Brain..	Epilepsia	0	0	2	0								
	Mania..........	6	0	4	0	6	0	6	0	12	0	0·496	0·000
Eruptive fevers.......	Variola	30	8	11	5								
	Varicella........	26	0	31	0	57	8	45	5	102	13	4·218	12·745
	Erysipelas......	1	0	0	0								
Dropsy.....	Anasarca.... ..	11	2	11	4	11	2	11	4	22	6	0·909	27·272
Rheumatic affections.	Rheumat. acut. et chronicus..	42	2	23	0	42	2	23	0	65	2	2·688	3·076
Venereal affections..	Syphilis Primitiva.........	12	0	5	0								
	,, consecutiva..	1	1	0	0								
	Gonorrhœa	2	0	2	0	17	1	7	0	24	1	0·992	4·166
	Hernia humorails...........	2	0	0	0								
Specific diseases.....	Atrophia.., ...	1	1	4	1								
	Lepra..........	2	1	0	0	20	2	7	1	27	3	1·116	11·111
	Dracunculus. ..	17	0	3	0								
Diseases of the eye ..	Morbi oculorum.........	3	0	10	1	3	0	10	1	13	1	0·537	7·692
Do. skin..	Morbi cutis....	59	1	43	0	59	1	43	0	102	1	4·218	0·980
	Other diseases .	136	1	179	4	136	1	179	4	315	5	13·027	1·587
	Total....	575	57	718	57	575	57	718	57	1293	114	53·478	8·762

Remarks on the preceding tables

The average annual strength of the convicts, during the ten years, has been 106, and the admissions into hospital, have amounted to 185, or 175 per cent; the average annual number of deaths has been 12, or 11·603 per cent, on the strength; the total number of admissions, having been 1856, of deaths 123, and, the aggregate strength 1,060.

The prisoners waiting for trial have been more numerous, the aggregate strength amounting to 2,418; the admissions into hospital, have been 1,293, or 53·478 per cent, and the number of deaths 114, or 4·714 per cent, on the strength.

The most numerous admissions amongst both classes of prisoners, have been from *fevers, bowel complaints, eruptive diseases, rheumatic affections and dropsies;* and the greatest mortality has been produced by the same diseases.

In the following table No. 18, are exhibited the annual admissions and deaths, from five of the principal diseases, viz. fever, cholera, diarrhœa, dysentery and anasarca; the total sick treated and mortality are also given for the purpose of shewing the great proportion of the whole mortality occasioned by these diseases; amounting to no less than 181, out of 237, or very nearly 3-4ths.

		1829.		1830.		1831.		1832.		1833.		1834.		1835.		1836.		1837.		1838.		Total.	
		Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad,	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad	Dd.		
Convicts.	Fever	36	2	16	0	32	0	26	0	44	4	73	9	49	3	21	0	66	3	51	4	414	25
	Cholera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Diarrhœa	15	1	8	0	19	2	11	0	46	3	46	6	58	18	13	3	56	8	25	5	297	46
	Dysenteria	0	0	0	0	0	0	2	1	7	0	19	4	26	6	6	2	9	1	10	1	79	15
	Anasarca	1	0	0	0	1	1	2	0	3	1	9	3	3	2	3	2	3	2	1	0	26	11
	Admissions and deaths from these diseases	52	3	24	0	52	3	41	1	100	8	147	22	136	29	43	7	134	14	87	10	816	97
	Total admissions and deaths	149	4	133	3	118	3	103	1	178	11	280	29	245	30	119	7	395	18	136	17	1856	123
	Strength each year	128		88		74		74		101		100		138		96		155		104			
Prisoners under Trial.	Fever	14	2	17	1	14	0	17	1	43	2	47	3	35	3	13	1	30	1	47	6	277	20
	Cholera	0	0	0	0	0	0	0	0	0	0	2	1	1	1	0	0	2	1	1	1	6	4
	Diarrhœa	1	0	3	1	19	0	28	3	51	4	39	9	28	6	14	3	27	9	28	9	238	43
	Dysenteria	0	0	0	0	0	0	1	1	2	1	20	3	12	2	4	1	5	2	30	1	74	11
	Anasarca	0	0	0	0	4	0	2	0	2	1	4	1	6	3	0	0	4	1	0	0	22	6
	Admissions and deaths from these diseases	15	2	20	2	37	0	48	5	98	8	112	17	82	15	31	4	68	14	106	17	617	84
	Total admissions and deaths	42	3	64	4	80	0	86	5	195	10	202	18	153	15	88	*11	167	†24	216	24	1293	114
	TotalStrength each year	232		201		160		142		266		334		249		233		363		236			
	Admissions and deaths amongst both classes of prisoners	191	7	197	7	198	3	189	6	373	21	482	47	398	45	207	18	562	42	352	41	3149	237
	TotalStrength each year	360		292		234		216		367		434		387		329		518		340		ag: str. 3478	
	Per centage of deaths to strength	1	·944	2	·397	1	·282	2	·777	5	·722	10	·829	11	·628	5.	471	8	·108	12	·058	6	·239
	Per centage of sick to strength	53	·055	67	·465	81	·615	87	·500	101	·634	111	·059	102	·844	62	·918	108	·494	103	·529	90	·540

* 5 from Variola.
† 7 from Variola.

The marked increase of mortality in this Jail from the year 1833, will not fail to be observed; it has been occasioned chiefly by bowel complaints and dropsy; indeed during the last six years, the maladies whence the increased number of deaths has proceeded, may be considered diseases of debility, for febrile and other complaints of an acute form, although assuming a sthenic character at the outset, have rapidly and almost invariably in those cases where death ensued, declined in their progress, into one or other of the two forms of disease above mentioned.

The principal exciting cause of this increase of sickness and mortality, in the opinion of the executive medical officer, and also of the superintending surgeon, has been the over-crowded and badly ventilated state of the cells;—and as will be seen, in 1836, (table No. 18) a considerable amelioration took place, after the removal in the previous year, of one hundred prisoners from the jail; and the annual per centage of deaths to strength, will likewise be found to corroborate this opinion.

The character of these diseases has been very similar to those already described as prevailing in the Madura and other jails in the division, nor has the treatment differed.

It is worthy of observation that the inmates of this jail have almost completely escaped from attacks of cholera, though the disease prevailed in the district in 1829 and 1833.

Amongst the class "other diseases", ulcers form the greater proportion, as in other jails; and previous to 1838 owing to the confined and ill ventilated state of the hospital, they frequently assumed a malignant character; and this condition of the hospital is reported by the medical officer, to have exerted an equally pernicious effect on other complaints.

Two of the deaths, under the head "other diseases", were the result of wounds; in 1830 ten men attempted to escape, two were cut down, and the other eight severely wounded by the peons; no less than sixty wounds having been inflicted on these ten men!

NEGAPATAM.

Description of the Town of Negapatam. The town of Negapatam which is situated on the coast, in 10° 45″ North latitude, and 79° 55″ East longitude, stands on an open, level, sandy piece of ground, having a gentle slope to the sea, above which it is elevated about 3 or 4 feet. It is of considerable extent, being built in a straggling manner; and is estimated to contain a population of 10,000 souls; a large proportion of these, are the descendants of the original Dutch and Portuguese colonists, by whom this place was formerly occupied; the remainder is made up of hindoos, musselmauns and brahmins, but of these the hindoos constitute by far the largest proportion. Three principal streets or thorough-fares, which are wide, open and airy, intersect the town, two of them run parallel to each other, one at the east, and the other at the west end, being connected by the third nearly in the centre, from these all the others branch off, and are nothing better than narrow, confined lanes, more particularly in the part occupied by the Portuguese. Bazaar. The bazaar consists of four streets at the south east side, where various kinds of grains, vegetables, piece goods, country medicines &c., are exposed for sale.

The country immediately surrounding the town is open and level, and a short distance to the southward there is an uncultivated waste, which is covered with sea water during the monsoon. Drainage. From the slope however, towards the sea, there are no stagnant pools in or about the town, and a large drain running to the beach carries off all superfluous water.

Houses. The houses are generally large, and built of brick with mud or chunam, and roofed with tiles; those of the more respectable natives are clean, and well ventilated; they are usually quadrangular buildings, consisting of two

compartments, having outer and an inner courts, with verandahs round the inner sides; the outer court serves as a kind of anti-room to the inner one, which is the "sanctum sanctorum," where the families chiefly reside, and into which strangers are seldom permitted to enter. The houses occupied by the European residents, and respectable Dutch, and Portuguese inhabitants, are in an open and airy situation, to the westward of the town, facing the esplanade, which intervenes between them and the sea. The ruins of the old Dutch fort, are still to be seen surrounded by a ditch, which is however filled up in most places, it had long been a receptacle for stagnant water, and other putrescent matters, the exhalations from which were considered highly injurious to the health of the inhabitants; besides having been an intolerable public nuisance.

Back-water. Immediately to the south of the town a backwater is formed, where the Valanganeg river empties itself into the sea, it is capable of admitting vessels drawing little water, such as dhonies and mussoolah boats &c., and small country craft resort to it for shelter during the boisterous weather of the monsoon; near its mouth, a long bar of sand running to a point, divides the back-water from the sea, over which the surf in stormy weather breaks with great violence.

Roads. The roads in the immediate neighbourhood of Negapatam are in very good order, having of late undergone great improvements, most of them are shaded by rows of trees on either side. A new road has recently been made to the westward, leading to Tanjore, which commences to the north of the town, it is considerably elevated above the marshy ground through which it runs, and substantial bridges have been thrown across an arm of the back-water, and some small nullahs which lay in its course; it affords a more direct line of communication, between the seaport town of Nagore, and Tanjore, than that through Negapatam, cutting off a considerable angle, which conveyances were formerly obliged to traverse by passing through the town.

Salubrity of the Station.

The station is remarkably healthy, and free from diseases of miasmatic origin, a circumstance which might not, *a priori* be expected, from the marshy nature of the country to the southward; the marshy grounds being however open and exposed to the winds from every quarter, no accumulation or concentration of such exhalations as may arise from it, can take place; and this appears to account for the immunity from disease, enjoyed by the inhabitants.

Diseases intermittent fever &c.

Intermittent fever is of rare occurrence, and the commencement of the monsoon seems to be the only unhealthy period, as the natives then suffer from dysenteric affections, fevers of an ephemeral type, catarrhs, and other diseases caused by obstructed perspiration. The fevers generally yield readily to emetics, purgatives and antimonials, but they occasionally assume a continued form, and sometimes prove fatal; severe cases occur principally among the convicts, and are attributable, to their working in irons, exposed to the sun, and to sudden transitions from heat to cold, at particular seasons of the year.

Fevers severe amongst convicts.

Firing the breasts of children.

A custom exists of firing the chests of children between the ages of four, and eight years, six or eight round cicatrices being observable on the breast of every child, after attaining its eighth year. Anasarcous diseases, psora and venereal, are frequent.

Anasarca, psora venereal.

Native treatment of disease.

The native hakeems have no systematic method of treating diseases; in fevers the medicines used are stimulants, such as aromatic tonics, cloves and ginger; in dysentery decoction of cloves, and pomegranate bark are administered, and have been found useful in the chronic forms of the disease.

Manufactures, &c.

The inhabitants are generally industrious, and fond of commercial pursuits; they traffic in rice, coffee, and other articles imported from Ceylon, and the islands to the eastward. There are no manufactures of any great extent at Negapatam, but cotton and silk cloths are wove; and cocoanut, gingelie, and lamp oils which are here very cheap, are made in considerable quantities; ship build-

Ship building & rope making. ing, and the manufacture of coir ropes are likewise carried on, but not extensively.

Sepoy Barracks. The barracks for the sepoys, (a small detachment of native troops being stationed here) is an old Dutch dwelling house, situated to the north west of the esplanade, on a dry, sandy piece of ground, well sheltered and having a garden in front enclosed by a low wall; it is built of briek and mud, has a tiled roof, and consists of three apartments, (a centre and two side rooms), with a long verandah in front; the former is that used by the sepoys, of whom about fifteen only are on guard at one time; such as have families reside in the town, so that few, except the guard, remain in the barracks at night. The principal room is 40 feet in length, by 19 in breadth, having a door and two windows in front, with another door, leading into a back verandah, there is a small yard in the rear, surrounded by out-offices, and a high wall; the house is dry, and free from any causes likely to produce disease.

Hospital. The hospital for the detachment, is in a healthy airy situation, facing the sea, from which it is distant about two hundred yards; in its front is a long cultivated slip of garden ground, surrounded by a low wall; the building is composed of three rooms, the centre in which the sick are accommodated, is 45 feet in length, by 14 in breadth, being well ventilated, and lighted by a door, and two windows in front; the other two rooms are used as a dispensary, and for stores; it is built of brick and mud, and roofed with cadjans; a necessary and eookroom are attached to it, and the whole of the premises are in good repair, and capable of accommodating thirty patients. For table of diseases, see appendix, under the head Tanjore.

The jail is spaeious, lofty and eommodious, built of brick and chunam, and eovered with tiles. It is an old family residence, situated on a slight eminenee, with its front to the sea, from which it is distant about 50 yards.

It consists of one large hall in the centre, 50 feet by 40, and ten other rooms of various dimensions, each 30 feet in height, all well ventilated, and several of them having sky-lights.

The verandah in front is 62 feet long and 16 feet broad, that on either side and in the rear, is of less breadth, but it is enclosed and partitioned off for cook rooms. The jail is calculated to accommodate 250 prisoners.

The hospital is situated behind the jail and within the same enclosure; it is equally substantially built, but not so well ventilated as the apartments of the jail. It is capable of containing 30 patients. See table at the end of this report for diet, clothing, labour, &c.

Previous to 1834, no medical returns were furnished from this jail, the usual tables of disease cannot therefore be given. The sickness and mortality however, which have occurred amongst the prisoners, from that year, to 1841 inclusive, are exhibited in the following table No. 19, with the per centage of sick to strength, and of deaths to sick treated.

The admissions into hospital are few in number, compared with other jails in the division, but the per centage of deaths is great, not only with respect to the sick treated, but also to the strength; amounting to 10·357 on the admissions, and 4·179 on the strength.

This however, will not be wondered at, when it is considered that the prisoners at this station, consist exclusively of convicts who have been transferred from other jails, many of whom are reported to have arrived in an advanced stage of disease, especially those from Combaconum.

It is considered to be by far the most healthy jail in the division, and this can only be ascribed to its locality, and to the ample airy room afforded to its inmates, for with regard to diet, clothing, labour and exposure out of doors, all prisoners are placed in pretty equal circumstances.

JAIL OF NEGAPATAM.

No. 19—*Table exhibiting the Number of Admissions and Deaths of the Convicted Prisoners, from each class of Disease, from* 1834 *to* 1841 *inclusive.*

CLASSES	DISEASES.	1834 to 1841 inclusive. Aggregate strength 1361. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions & deaths from each class of disease. 1st Half. Ad.	Dd.	2nd Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
Fevers......	Febris ephemera	53	0	101	0	70	5	119	4	189	9	14 ·361	4 ·761
	,, intermit. quot	10	2	9	1								
	,, remittens....	7	3	0	0								
	,, com. continua...........	0	0	9	3								
	Cholera........	1	0	7	1	1	0	7	1	8	1	0 ·607	12 ·500
Diseases of the Abdominal viscera.	Diarrhœa......	6	1	9	2	36	3	42	9	78	12	5 ·927	15 ·384
	Dysenteria acuta et chronica.	10	2	6	4								
	Colica..........	3	0	3	0								
	Obstipatio......	16	0	22	1								
	Dyspepsia......	1	0	2	2								
	Hepatitis.......	1	1	0	0	1	1	0	0	1	1	0 ·076	100 ·000
Diseases of the Lungs.	Catarrhus......	3	0	9	0	8	4	16	5	24	9	1 ·823	37 ·500
	Asthma.........	1	0	1	1								
	Phthisis pulmonalis..........	2	2	5	3								
	Pneumonia.....	2	2	1	1								
Diseases of the Brain.	Epilepsia.......	1	1	0	0	5	5	4	3	9	8	0 ·683	88 ·888
	Paralysis.......	2	2	4	3								
	Phrenitis.......	1	1	0	0								
	Mania..........	1	1	0	0								
EruptiveFevers......	Variola.........	0	0	1	0	13	0	1	0	14	0	1 ·063	0 ·000
	Varicella.......	13	0	0	0								
Dropsies...	Anasarca.......	6	3	4	3	8	5	5	4	13	9	0 ·987	69 ·230
	Ascites.........	1	1	0	0								
	Hydrothorax....	1	1	1	1								
Rheumatic affections.	Rheumat.acutus et chronicus..	6	0	2	0	6	0	2	0	8	0	0 ·607	0 ·000
Specific diseases.	Atrophia........	5	2	3	0	6	2	6	1	12	3	0 ·911	25 ·000
	Lepra..........	0	0	1	1								
	Dracunculus. ..	1	0	2	0								
Diseases of the eye.	Morbi oculorum.........	1	0	3	0	1	0	3	0	4	0	0 ·303	0 ·000
Diseases of the skin.	Morbi cutis.. ..	13	0	10	0	13	0	10	0	23	0	1 ·747	0 ·000
	Other diseases..	91	2	57	1	91	2	57	1	148	*3	11 ·246	2 ·027
	Total....	259	27	272	28	259	27	272	28	531	55	40 ·319	10 ·357

* Two of these were from wounds inflicted by the peons, when several prisoners attempted to escape from the jail in 1837.

DISTRICT OF TRICHINOPOLY.

General description of the Collectorate.

This Collectorate includes an area of 3,000 square miles, and is divided into eight Talooks, viz. Conand, Lalgoody, Arialoor, Woodiarpallum, Mooserg, Tooriore, Valcondapoorum and Vetticutty. The population is estimated at 567,976 souls. It is bounded on the south east by the Coleroon river; on the south partly by the Tondiman Rajah's country, and partly by Madura; on the west by Coimbatore; on the north west by Salem; and on the north and east by south Arcot. It may be described as an extensive plain, with here and there an isolated rocky mountain of granite, rising abruptly from the surface.

The river Cauvery flows through the centre of the district, and a little above Trichinopoly divides into two branches—the southern retains its original name (of Cauvery)—and the other assumes that of Coleroon—numerous small streams are given off from them forming a rich and extensive *delta,* lying between Porto-Novo and Negapatam, on the coast.

The rivers in this district derive their chief supply of water from the western mountains, and the mountains of Mysore; shortly after the south-west monsoon sets in, they become filled from bank to bank—and the water is drawn off in every direction for the cultivation of the country, by artificial cuts, sluices, &c., the whole country being nearly under water by the end of May, from which time until March a constant supply is available, thus enabling the farmers, to carry on cultivation for fully three-fourths of the year—and to raise two, and sometimes three crops of rice annually.

To the southward of the station of Trichinopoly however, the ground is high and comparatively barren, from not being capable of irrigation from the rivers, and with this exception the cantonment is immediately surrounded by rice lands, several square miles in extent.

Station of Trichinopoly.

Trichinopoly the principal station, and head quarters of the troops, composing this division of the army, is situated in North latitude 10° 50′, and East longitude 78° 44′, on the south bank of the river Cauvery; distant from the sea about 85 miles, and about 207 miles S. S. W from Madras.

The station is bounded on the north and east, by the river Cauvery, and on the south and west by an extensive open plain, interspersed with numerous insulated masses of granite rock, and to the westward the country is well wooded, and highly cultivated.

Climate.

A steady high temperature, cloudless sky, a dry close and sultry atmosphere, with much glare, and intense radiation of heat, are the characteristics of the climate of Trichinopoly. The heat, drought and glare, are often very intense for months together; the hot weather is however a good deal broken and varied, by high westerly winds; and whirlwinds often accompanied by clouds of sand and dust, recur at short intervals often for a week or two at a time. The high winds and dusty weather which chiefly prevail during May, June, and July, render these months the most disagreeable part of the year, the atmosphere being obscured during the day by the clouds of dust. The monsoons are not well marked, unless by a change in the direction of the wind.

The climate of this part of the southern division, may with tolerable accuracy be divided into three seasons; viz. the hot and dry, the hot and windy, and the cool and showery, or more simply into eight months hot and dry, and four showery. March, April and May are always exceedingly sultry, with much thunder and lightning, and occasionally heavy thunder showers occur; but from 9 A. M., until 4 P. M. it is always disagreeably hot. June and July are also hot, although in a less degree, the heat being generally at its maximum about the middle of May. When the westerly wind sets in, the heat is moderated, but when accompanied by dust it is, as already remarked, particularly unpleasant. Thunder showers occasi-

onally occur during a week or two, in the months of August, September, October and November, which are cool, cloudy, and pleasant. December, January and the greater part of February, are dry, cold in the mornings and evenings, but sultry and close during the forenoon. Fogs and dews are rarely known in the months of March, April and May, when the surrounding country presents the appearance of a vast desert. The rivers and tanks become dried up ; the trees shed their leaves, and vegetation is completely at a stand ; the respiration of animals at this time is panting and oppressed, in short all nature, both vegetable and animal, seems to droop, and shrink from the raging mid-day heat. When the rains succeed nature soon revives, and vegetation bursts forth with new life and vigour, and the eye is relieved from the oppressive glare and barrenness.

The soil being so arid and sandy, there are scarcely any fogs, vapours or noxious exhalations and in this respect the climate is salubrious, the atmosphere being seldom damp or humid.

Annual fall of rain.

The mean annual fall of rain does not exceed 30 or 40 inches, and is often considerably less.

The mean annual temperature of Trichinopoly, as ascertained by accurate observation, is about $85\frac{1}{2}°$, the greatest heat observed being 102° in the shade, the lowest 68°. When exposed to the sun the thermometer frequently rises to 140°. The winds from October to May, are from the east and north. From May to October they become variable, but are generally from the west, south-west or south, and also sometimes north-westerly. The changes of the wind are generally very regular, at the stated periods which mark the two monsoons.

Geology, Soil &c.

The soil on all the high ground around Trichinopoly is rocky, sandy or gravelly, generally of but little depth, and is barren and uncultivated. The rocks are either distinctly stratified, with rounded summits, or are disposed in large detached tabular masses. The strata or layers of rock, have generally a dip and declination to the south-west, west, or north-west, at angles varying from 25° to 30°, and seldom

rise to any great height above the level of the country. There are several large beds of stratified rock immediately to the south-west of the cantonment, between the European and artillery barracks, on which the solitary cells, or congee houses for Europeans are built. Besides *the rock* of Trichinopoly, there are several other large rocks in the neighbourhood, of similar character and appearance, rising abruptly in large masses of irregular shape, to a considerable height.

The predominating or largest rocks, seems to be generally speaking, what would be called by geologists, secondary or transition granite, the lower rocks being secondary trap and greenstone.

The granite has externally a dark or dull earthy colour, internally it is variegated, and contains a large proportion of felspar, with some quartz and mica. It is a hard and very durable stone, forming an excellent building material; quarries of it are worked by natives. It is hewn out into pillars, and steps for staircases, and the walls of the fort and gateways are built of it. The sand of the rivers consists of fine quartz and felspar, interspersed with numerous small shining scales of mica, which sparkle and glitter like gold leaf, and is sometimes mistaken for gold dust; from the red colour which many of the rocks assume externally, it is probable that they contain a considerable proportion of iron-ore. No ores however are wrought, nor are there mines of any kind nearer than Salem, where the iron-ore is of excellent quality.

On all the low ground, and near the banks of the rivers, the soil is rich and remarkably productive. In many places near the fort, as already noticed, where it has been long under cultivation, it is a deep and black loam, and yields three crops annually.

Wherever there is a sufficient supply of water, the land is under rice cultivation, which extends for many miles along the banks of the rivers. The soil in the low grounds has generally a bottom of deep, stiff and tenacious red coloured clay, with

an intermixture of sand, from which excellent bricks and tiles are made.

Produce. The chief produce of the soil are rice, cocoanuts, (cultivated chiefly for the oil) plantains, cholum, raggee, and various kinds of grain, tobacco is also cultivated to a great extent, in the neighbourhood, and cheroots form one of the principal exports; sugar-cane is but little grown. Every thing in husbandry depends on irrigation, manure being very little used.

There are some very good gardens around Trichinopoly, excellent graft mangoes, grapes, pine-apples, custard apples, limes, oranges, and water-melons, and a variety of other kinds of fruit produced, are peculiarly grateful during the hot season.

Manufactures. The natives of Trichinopoly have long been famed for their skill in the manufacture of hard ware, cutlery, and jewellery. Their harness and saddlery are also excellent, both as to workmanship and materials, and very moderate in price; and large quantities of cheroots are manufactured from tobacco of superior quality, grown in the neighbouring districts.

Habits. The people are an active, intelligent and industrious race; but those of low caste have the character of being addicted to thieving; arrack and other intoxicating liquors are much used by them, and they likewise smoke bhang. An ancient and strange custom exists, of employing a "Khoucurrah" or thief catcher, who acts as a kind of sentinel during the night, for the protection of houses and property; these persons are generally attached to the compound and house, as a matter of necessity rather than of choice, and the continuance of the custom to the present time would seem to convey no very favourable idea of the efficiency of the police establishment. Khoucurras are said to have been formerly the dependants of a neighbouring rajah; the noise they make, by shouting and challenging during the night, is exceedingly unpleasant, and disturbs the repose of strangers.

Insects, reptiles &c.

The dry ground, as in other parts of India is infested with myriads of white, black and red ants, and other destructive insects, which commit great ravages both in the fields, and in houses; water snakes are very common in the paddy fields; scorpions, and the *cobra-de-manille* are frequently found in houses; the *cobra-de-cappella* is also occasionally met with. Common striped squirrels are very numerous, noisy, and troublesome, they frequent the roofs of houses, and are also destructive to fruit. Frogs swarm in the pools and tanks after heavy showers, and fill the air at night, with loud and incessant croacking; eye flies and musquitoes abound, especially after rain.

Water.

The water is of excellent quality, and abundant in quantity, being derived either from the Cauvery or its artificial branches, or from wells which have been dug in almost every compound. Its purity is owing to the beds of clay and sand, through which it percolates.

Fort.

The Fort, which includes the old town of Trichinopoly, is about two or three furlongs from the S. W. bank of the river Cauvery at the nearest point, and is a place of great antiquity. The flag-staff is placed on the summit of a rock of granite,rising to a height of about 500 feet, called the "Rock of Trichinopoly," which forms a conspicuous and imposing object, seen from a great distance in every direction; the view of the rock from the west, being not unlike that of Edinburgh castle in miniature. There is easy access from the south side, to the flag-staff by means of a spacious flight of stone steps, which about half way up passes through the site of an old magazine, accidentally blown up in the year 1772. This elevated spot commands a most extensive and varied view of the surrounding country, including the island of Seringham with its numerous pagodas, and the serpentine meanderings of the Cauvery and Coleroon rivers. In the distance, on the north and west, are seen the Shervaroy and Salem mountains, which divide the Carnatic from the Mysore country; on the east, south, and S. W. the perspective is exten-

sive, and beautifully diversified by alternations of hill and dale, wood and stream, champaign country and cultivated fields.

The fort of Trichinopoly with its strong and massy walls built of solid masonry, which are in general still in a good state of repair, though in some places rather dilapidated, bears the appearance of having been strongly and regularly built. The walls are in some places double, and from 20 to 30 feet in height, of very considerable thickness, and upwards of two miles in circumference. Within them is a very extensive pettah, or native town, with a population of nearly 30,000 souls; the houses and huts, are generally of the ordinary Indian construction, being low, narrow and very closely huddled together, having small pandals in front of them. As in other native towns the huts are without windows, and almost all present to a European eye, the appearance of being filthy, dark and ill-ventilated; and an air of discomfort pervades the whole. The houses are however arranged in tolerably straight, wide and regular streets, which are usually crowded at all hours of the day, with multitudes of passengers, bullock bandies and cattle; most of the streets having bazaars or shops for the sale of native manufactures, and commodities of every description.

The *Pay office, Arsenal, Garrison Hospital,* and the *Commissariat, Ordnance* and *Medical stores,* are situated within the fort, in the vicinity of the main guard; as is also the *Jail,* capable of containing about 320 prisoners.

It has been observed from the crowded streets, numerous buildings, and the proximity to the rock, that the temperature of the fort is generally higher than that of the immediate neighbourhood or cantonment. Populous villages surround the fort in every direction.

The country for some miles round, especially to the south west and west, is exceedingly fertile, and in a high state of cultivation, being interspersed with numerous cocoanut topes, and gardens well stocked with fruit trees, and vegetables of

various kinds. The soil in many places is a rich black loam, producing excellent crops of rice, tobacco and various kinds of grain.

The jail which was erected in 1806, is placed in a confined situation near the east end of the fort, close to the rampart. It is 168 feet in length from east to west, and 124 in breadth from north to south. Additional buildings were erected in 1832, consisting of workshops, where cotton cloths, cumblies and paper are manufactured. The jail contains twelve sleeping cells, 20 feet by 14, each capable of accommodating about 20 prisoners. There are also eight cells for condemned prisoners, each 8 feet by 6, and two separate apartments for debtors and security prisoners. The whole building can accommodate about 320 prisoners.

The ventilation is very imperfect not only from the site, but also from the construction of the jail, the twelve cells being placed in two double rows.

The hospital is within the same enclosure as the jail, and though somewhat enlarged in 1832, it is still found to be deficient in accommodation and defective in construction; it is adapted for about 25 patients.

The diet, clothing, hours of labour &c. of the prisoners are given in the general statement annexed to the report of this division.

In the following table are shewn, the nature of the diseases and amount of mortality, which have occurred amongst the inmates during a period of ten years, from 1829 to 1838; it also exhibits the diseases classified, and points out the percentage of sick to strength, and of deaths to sick treated.

JAIL OF TRICHINOPOLY.

No. 20—Table exhibiting the number of Admissions and Deaths of the Convicted Prisoners, from each class of disease, for 10 years.

CLASSES	DISEASES.	From 1829 to 1838. Aggregate strength 2838. 1st Half. Ad.	Dd.	2nd Half. Ad.	Dd.	Admissions & deaths from each class of disease. 1st Half. Ad.	Dd.	2nd Half. Ad.	Dd.	Total admissions from each class.	Total Deaths from each class.	Average percentage of sick to strength.	Average percentage of deaths to sick.
Fevers......	Febris ephemera	104	1	83	0								
	,, intermit. quot	202	8	304	3								
	,, tertian........	9	0	21	0	389	23	472	6	861	29	30 ·392	3 ·368
	,, remittens....	40	9	40	3								
	,, continua.....	34	5	24	0								
	Cholera.........	25	7	24	5	25	7	24	5	49	12	1 ·729	24 ·489
Diseases of the Abdominal viscera......	Diarrhœa..	260	27	280	32								
	Dysenteria acuta et chronica.	66	4	79	17	333	32	370	49	703	81	24 ·814	11 ·522
	Obstipatio......	7	1	11	0								
	Hepatitis acuta et chronica...	1	0	0	0	1	0	0	0	1	0	0 ·035	0 ·000
Diseases of the Lungs	Catarrhus.......	7	2	16	3								
	Asthma.........	3	0	0	0								
	Pneumonia.....	14	0	10	0	25	2	26	3	51	5	1 ·800	9 ·803
	Hœmoptysis...	1	0	0	0								
Do. Brain..	Epilepsia	1	1	0	0	1	1	1	0	2	1	0 ·070	50 ·000
	Paralysis..	0	0	1	0								
Eruptive fevers......	Variola	8	5	0	0								
	Varicella........	6	0	55	1								
	Rubeola...... ..	3	0	10	0	17	5	67	1	84	6	2 ·965	7 ·142
	Erysipelas......	0	0	2	0								
Dropsy.....	Anasarca.... ..	16	4	17	7	16	4	17	7	33	11	1 ·164	33 ·333
Rheumatic affections.	Rheumat. acut. et chronicus..	106	3	103	3	106	3	103	3	209	6	7 ·377	2 ·870
Venereal affections..	Syphilis primitiva.........	1	0	1	0								
	Gonorrhœa	1	0	0	0	6	0	3	0	9	0	0 ·317	0 ·000
	Hernia humoralis............	4	0	2	0								
Specific diseases.....	Atrophia.., ...	52	9	68	18								
	Lepra..........	2	1	1	0								
	Dracunculus. ..	5	0	0	0	62	11	70	19	132	30	4 ·659	22 ·727
	Scrophula.	3	1	1	1								
Diseases of the eye ..	Morbi oculorum..........	21	0	20	0	21	0	20	0	41	0	1 ·447	0 ·000
Do. skin..	Morbi cutis....	76	0	33	0	76	0	33	0	109	0	3 ·847	0 ·000
	Other diseases .	846	12	620	4	846	12	620	4	1466	16	51 ·747	I ·091
	Total....	1924	100	1826	97	1924	100	1826	97	3750	197	132 ·368	5 ·253

The average annual numerical strength of the convicts has been 283, and the admissions into hospital 375, or 132·368 per cent. on the strength; the average number of deaths yearly has been nearly 20, or 6·955 per cent. on the strength.

The most numerous admissions have been from *fever*, *bowel complaints*, and *rheumatism*; and the greatest mortality has been occasioned by *bowel complaints*, especially *diarrhœa*, *fever*, and *atrophy* in the class of "*specific diseases*," *cholera* and *anasarca*, as the following table will shew, in which is given the admissions and deaths from these diseases each year, as also the total sick treated and mortality.

Table No. 21.—Jail of Trichinopoly.

	1829.		1830.		1831.		1832.		1833.		1834.		1835.		1836.		1837.		1838.		Total.	
	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.
Fever	26	3	26	2	24	3	45	1	128	3	102	3	170	4	70	1	222	4	48	5	861	29
Cholera	1	1	0	0	1	0	0	0	26	2	1	0	0	0	3	1	9	3	8	5	49	12
Diarrhœa	43	1	30	3	64	18	30	2	66	3	64	7	79	7	29	2	107	9	30	7	540	59
Dysenteria	1	0	10	4	2	0	6	0	80	9	11	1	11	2	9	1	13	2	2	2	145	21
Anasarca	1	0	0	0	7	2	3	2	2	1	7	1	3	1	2	1	5	2	3	1	33	11
Atrophia	10	0	16	1	53	12	14	7	18	4	2	1	3	2	0	0	1	0	3	0	120	27
Admissions and deaths from these diseases	82	5	82	10	151	35	98	12	320	22	185	13	265	16	113	6	357	20	94	20	1748	159
Total admissions and deaths	224	6	201	12	258	36	281	14	553	29	511	19	604	19	256	13	702	25	160	24	3750	197
Strength each year	240		220		311		263		313		332		362		300		332		160		2833	
Per centage of deaths to strength	2	·500	5	·000	11	·575	5	·323	9	·265	5	·722	5	·248	4	·333	7	·530	15	·000	6	·953
Per centage of sick to strength	93	·333	91	·363	82	·958	106	·844	176	·677	153	·915	166	·850	85	·333	211	·445	100	·000	132	·368

Thus it will be observed, that in this jail as in those already described, bowel complaints have caused the greatest amount of mortality; and in the opinion of the medical officers in charge, the badly ventilated state of the building has been the principal exciting cause of these affections. A marked tendency to dysentery has also been observed in several other

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diseases, particularly fever; and an obstinate diarrhœa has been in many cases, the immediate cause of death.

In the treatment of diarrhœa, it has been found, that along with attention to diet, ipecacuanha with opium and tonics, were the most appropriate remedies.

In the class of " other diseases," ulcers form nearly 2-3ds of the admissions; it has been remarked that the smallest scratch often becomes a troublesome sore in this jail, from the want of due ventilation both in the jail and hospital; and a fatal diarrhœa has ensued in several cases of ulcer, in patients who have.......been under treatment for some length of time in the hospital.

Amongst the deaths under the head " other diseases," are included no less than seven from sabre wounds, inflicted by the peons, when prisoners have attempted to escape; viz. two in 1830, and five in 1836.

The aggregate strength of the prisoners waiting for trial from 1829 to 1838, has been only 25, from whom there were 20 admissions into hospital, (including nine from bowel complaints) with 2 deaths, one from diarrhœa and one from dysentery.

Military Cantonment.

The Cantonment, in which the troops composing the garrison are quartered, stands at the distance of from two to three miles south-west of the fort, on the extensive plain already mentioned.

The lines for the men and the officers bungalows, cover a very large space of ground, being scattered over a superficial area of not less than 6 or 7 miles in circumference. Many of the bungalows occupied by the military officers and civilians are large, of elegant construction, and have extensive well wooded gardens attached to them; and a lofty and spacious building in a large, but very barren and rocky compound, situated near the southern extremity of the cantonment, is occupied by the general officer commanding the division.

Force at the station. The troops generally consist of one regiment of native cavalry, one company of European foot artillery; one regiment of H. M's. foot, and four regiments of native infantry, forming a force of between 4 and 5,000 men. The native infantry corps furnish detachments in rotation to Tanjore, Combaconum and Negapatam; and occasionally to Coimbatore, amounting to from four to six companies, which are relieved twice a year.

Artillery barracks. The barrack for the artillery lies at the western extremity of the cantonment; it is a spacious, lofty, well ventilated and even elegant building, in an airy and well raised situation. Though not originally intended for troops, it is found in respect to healthiness and convenience, to answer the purposes of a barrack remarkably well, both in point of accommodation and situation. It is substantially built of brick and chunam, well lighted by venetian doors and windows, and the roof being lofty, it is particularly well ventilated; it has a terraced roof, and brick floors chunamed over. There is a mango tope inside the barrack walls, where the men can amuse themselves, and take exercise morning and evening; and a stream of excellent water runs within 200 yards, in which they bathe throughout the greater part of the year. There is sufficient accommodation for one hundred men, but the parcherry or huts, and other quarters allotted to the married men with families, of whom there is generally a large proportion, are defective in size, comfort and ventilation; and the proportion of sick, among the families, from these causes is sometimes very considerable. The hospital at present in use, is an upstair octagonal building attached to the barracks, it is rather small, and somewhat exposed especially during high winds and heavy rains; but it is well ventilated, having venetian doors, on all sides; there is free access to an excellent terraced roof where exercise can be taken, by convalescents; recoveries are thereby much accelerated, which counterbalances its other disadvantages. A European hospital however, ought not if possible to be under the same roof with a noisy barrack, besides which the sick have great facilities for obtaining liquor from their comrades, and others.

European infantry barrack, and hospital.

The European infantry barracks are situated near the church, about half a mile eastward to those of the artillery, facing the south, and having a spacious gravelly parade in front. The barracks which are substantially built of brick and chunam, are calculated for the accommodation of 800 men. They form a quadrangle, one half of which, 177 yards in length by 6 yards in breadth, and 12 feet high is tiled, the other portion, 140 yards in length, 5 yards in breadth and 12 feet high, being bomb-proof; they have a clean, neat, and commodious appearance, and are unenclosed, except for a very short space near the barrack guard on the south face, which is in several important respects a great defect; there is a well of good water in the centre of the square, which does not however afford a sufficient supply for the use of the troops, recourse is therefore had to the river water which is also of wholesome quality.

The hospital stands at the distance of about 350 yards from the barracks, on the south-west side of the regimental parade, and faces the east. It is a commodious, lofty and well ventilated building, enclosed on all sides by a wall 10 or 11 feet in height; and though found to be too small when the sick list is unusually heavy, it is otherwise very complete. Additional accommodation is now in progress of being built.

Cavalry lines.

The cavalry lines are placed nearly in the centre of the cantonment; and necesarily occasion much noise, and dust, in their neighbourhood. They are besides fully half a mile distant from the riding school, which is also in a bad situation, and nearly two miles from the exercising ground. They however possess the great advantage of being near a stream of running water, besides which they are now very abundantly supplied with excellent water from a well close by. The water is drawn into chunam troughs.

The hutting ground for the men covers a large space to the eastward of the horse lines.

The cantonment is divided into two pretty equal parts, by a small stream said to be artificially derived from the Cauvery,

some miles above Trichinopoly, and is the same which runs past the artillery barrack, and near to the cavalry lines. This stream, in its long and tortuous course, irrigates many thousand acres of paddy fields, and flows by a circuitous and sweeping channel, from one end of the cantonment to the other, being of incalculable advantage to the inhabitants in its neighbourhood. It is from twenty to thirty yards in breadth, of various depths at different seasons of the year, but generally fordable, and sometimes in the hot season nearly dry, it is always crowded with multitudes of washermen, and water carriers. Two strong built bridges are thrown across the nullah, in the line of the greatest thoroughfares, named the "Pootoor," and "Dawks," bridges, at each of which a small European guard is stationed.

Native Infantry lines. The lines, places of arms, officers' quarters, and sepoys' hutting ground, of the four regiments of native infantry, which are formed as it were into two brigades, two regiments being quartered in each, are situated nearly at the opposite or north-west and south-east extremities of the cantonment, and are separated from each other by the stream before mentioned. They stand upwards of a mile and a half apart.

Immediately to the west of the Pootoor bridge, lies the Pootoor parade, a large rectangular plain, having a rocky and gravelly, but tolerably level surface. It forms the parade and exercising ground for the two regiments quartered in its immediate vicinity, and the whole of the troops in the cantonment are often assembled here for general parade, and guard mounting. It is bounded on three sides by the places of arms, regimental hospitals, officers' bungalows, and also by the public road and hutting ground for sepoys, and on the fourth by the bank of the nullah.

The officers' bungalows in this part of the cantonment, are in general neat and commodious, though some are rather small. Several have large and well wooded compounds, and a few have tolerably good gardens. They extend for nearly a mile to the N. W., as far as the large village of Warriore, but are

irregularly scattered, widely separated from each other, and several are at an inconvenient distance from the lines. The sepoys hutting ground lies to the east of the parade. The huts are disposed in tolerably straight, wide and regular streets, with channels in front; they seem too close and crowded, nor are they in general so healthy as the other lines in the cantonment. The hospitals are small, ill ventilated, too narrow, low roofed, and can accommodate only 30 patients. The lines of the two other regiments of native infantry, form the south-eastern boundary of the cantonment, having originally been intended as barracks for European artillery; the public buildings, the depôts or places of arms, and the hospitals, are here of much superior construction to those before mentioned. They face to the south, are built on a fine open level plain, with a rocky bottom, and sandy or gravelly surface, which forms an excellent parade. The barracks are roofed with tiles, blue washed, and enclosed by a wall eight feet in height, they are well shaded in front by some fine old banyans, which are highly ornamental to this side of the cantonment. The same may be said of the hospitals, which are under the same roof. They are neatly constructed, situated about 300 yards to the rear of the barracks, and raised about 3 feet above the ground; they are floored with stone, have neat compounds around them, and are also enclosed by walls. The lines or hutting ground of the sepoys, are to the eastward of the hospitals, immediately in the rear of the places of arms, and at a convenient distance. The huts here are of a superior description, though some are rather low and confined; they are divided into wide and regular streets, admitting of a free circulation of air, are consequently well ventilated, and being kept generally very clean, are particularly healthy. The proportion of sick is said to be usually less here than in the Pootoor lines.

There is a very large tank to the south, partially filled with water, which forms the boundary of the parade and exercising ground. The roads are planted with trees on each side, and there are several topes of trees in the distance, which add much to the beauty of the country. A want of officers' bunga-

lows is felt at the Tanjore side of the cantonment, which though exposed to dust and high winds at some periods of the year, is in other respects well situated and healthy.

General parade ground. The general parade is an extensive open plain, on the extreme south of the cantonment, stretching from the church nearly two miles. The sub-soil is rocky or gravelly, with a sandy, level surface, but in many places it is intersected by the channels of numerous streams. It affords ample space for exercising and manœuvering the whole of the troops in garrison, who, for two or three months in the cool season, are usually out once or twice a week; the butts for artillery practice are constructed on its west side, and it is bounded on three sides by the race course and public roads, which as in other parts of the cantonment, are planted with rows of trees, some being of a very large size; these roads form the fashionable morning and evening ride. The race course is of ample extent, but rather sandy in some places; and the stand is now in ruins, there having been no public races for many years.

Public rooms. Public rooms, raised and supported by voluntary contribution, are placed in a centrical situation a little to the west of the cavalry lines. They contain a subscription library, well supplied with books, and periodical publications; and a reading room.

Places of worship. St. John's Church, a handsome building, is situated close to the general parade, on the north-west face, it is rather distant from the Pootoor side of the cantonment, and is nearly three miles from the fort; it affords ample accommodation for the European inhabitants and troops; divine service being performed regularly twice on Sunday. The churchyard is a spacious enclosure thickly studded with the tombs of Europeans. This church is rendered interesting as the place at which Bishop Heber preached his last sermon, his philanthropic labours having been suddenly terminated at Trichinopoly on the 3d April 1826; and his remains are entombed near the altar, a mural tablet with a short and simple epitaph, marking the spot.

There is a small roman catholic chapel, and a burying ground in the western outskirts of the cantonment, at which a Portuguese priest officiates, as at other European stations throughout the presidency.

There is likewise a large missionary chapel in the fort.

The native inhabitants are principally Hindoos or Gentoos, probably not more than one fifth being Musselmauns. In the native infantry regiments however, the latter are usually two-thirds, or three-fourths of the whole.

Pagodas. The hindoo pagodas on the island of Seringham, which is 9 miles long, and from 1 to 2 in breadth, have long been famous over India for their number, size, wealth, and antiquity, and there are likewise great numbers of other pagan buildings of smaller note, some literally covered with carving, and ornamental work. Many sacred spots, are to be met with throughout the cantonment. The natives generally speaking, are followers of Vishna.

Burying and burning grounds. The burying and burning grounds, are usually ill-placed, being close to the public roads, and in crowded parts of the cantonment, and suburbs. This appears a great error in a sanatory point of view, and might be easily remedied, there being much waste ground available at a moderate distance.

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Table No. 22.—Return of sick of the European Troops, exhibiting the half yearly Admissions and Deaths from the principal diseases, and those which have been either Epidemic or Endemic, during the period of ten years, from 1829 *to* 1838 *inclusive.*

Years.			Admissions and Deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	,, continued.	,, intermittent.	,, remittent.	Guinea worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small Pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & Injuries.	Other Complaints.	Average strength each year.	Annual per centage of sick to strength.	Annual per centage of deaths to sick treated.	Annual per centage of deaths to strength.
1829	Admitted.	1st half.	1,022	2	0	0	16	0	0	127	110	0	0	110	25	7	0	46	0	0	65	16	0	9	4	0	65	420	895	199 ·888	1 ·732	3 ·463
		2d ,,	767	0	0	0	10	0	0	8	104	0	0	100	24	5	0	17	0	0	210	8	0	28	0	0	41	212				
	Died......	1st half.	22	1	0	0	11	0	0	0	6	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	1				
		2d ,,	9	0	0	0	0	0	0	0	2	0	0	1	0	1	0	3	0	0	0	0	0	0	0	0	0	2				
1830	Admitted.	1st half.	565	0	0	0	26	0	0	16	72	0	0	72	8	0	0	18	0	0	135	6	0	7	1	0	34	170	944	135 ·169	2 ·037	2 ·754
		2d ,,	711	1	0	0	9	0	0	23	118	0	0	107	28	12	0	62	2	0	107	23	0	11	14	0	54	130				
	Died......	1st half.	8	0	0	0	4	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	1				
		2d ,,	18	1	0	0	1	0	0	0	8	0	0	0	0	2	0	4	0	0	0	0	0	0	0	0	0	2				
1831	Admitted.	1st half.	684	2	0	0	5	0	0	14	74	0	2	61	18	62	0	51	1	0	23	33	0	17	24	0	78	219	875	142 ·400	2 ·327	3 ·314
		2d ,,	562	1	0	0	3	0	0	11	78	0	0	36	15	64	0	50	0	0	62	18	0	8	23	0	52	141				
	Died......	1st half.	17	2	0	0	1	0	0	0	6	0	0	1	0	0	0	2	0	0	0	1	0	0	1	0	0	3				
		2d ,,	12	0	0	0	1	0	0	0	5	0	0	0	0	2	0	2	0	0	0	0	0	0	2	0	0	0				
1832	Admitted.	1st half.	644	1	0	0	152	0	0	6	81	0	2	85	3	10	0	39	0	0	5	22	0	5	16	0	57	100	855	144 ·327	5 ·429	7 ·836
		2d ,,	590	0	0	0	0	0	0	2	72	0	1	70	1	8	0	58	0	0	94	19	0	8	19	0	84	154				
	Died......	1st half.	57	1	0	0	39	0	0	0	6	0	0	3	0	2	0	3	0	0	0	0	0	0	0	0	0	3				
		2d ,,	10	0	0	0	0	0	0	0	3	0	0	1	0	0	0	2	0	0	0	0	0	0	2	0	0	2				
1833	Admitted.	1st half.	628	4	0	0	8	0	0	2	62	0	13	48	2	2	0	42	0	0	17	24	0	31	19	0	75	279	850	168 ·352	2 ·865	4 ·82[illegible]
		2d ,,	803	0	0	0	3	0	0	4	76	0	6	50	1	0	0	46	1	0	32	11	0	96	16	0	73	388				
	Died......	1st half.	25	3	0	0	6	0	0	0	6	0	0	2	0	0	0	3	0	0	1	1	0	0	2	0	0	1				
		2d ,,	16	0	0	0	1	0	0	0	6	0	0	2	0	0	0	3	0	0	0	0	0	0	2	0	0	2				
1834	Admitted.	1st half.	739	0	0	0	2	2	13	4	65	0	3	73	2	0	0	46	0	0	13	10	0	296	18	0	84	108	825	181 ·333	1 ·604	2 ·909
		2d ,,	757	2	0	0	0	6	13	1	60	0	7	99	1	0	0	41	2	0	21	21	0	334	24	0	43	79				
	Died......	1st half.	12	0	0	0	2	0	0	0	4	0	0	2	0	0	0	1	0	0	0	0	0	0	1	0	0	2				
		2d ,,	12	2	0	0	0	0	1	0	3	0	0	2	0	0	0	2	0	0	0	1	0	0	0	0	0	1				
1835	Admitted.	1st half.	861	1	1	0	0	25	14	1	111	0	2	127	6	0	0	48	1	0	34	27	0	185	36	0	102	140	885	209 ·039	2 ·108	4 ·406
		2d ,,	989	3	0	0	0	8	32	6	58	0	4	158	42	3	0	81	0	0	63	55	0	231	36	1	62	146				
	Died......	1st half.	22	1	0	0	0	0	0	0	10	0	0	6	0	0	0	2	0	0	0	0	0	0	1	0	0	2				
		2d ,,	17	1	0	0	0	0	0	0	5	0	0	4	0	0	0	2	0	0	0	0	0	2	1	0	0	2				
1836	Admitted.	1st half.	667	2	0	0	0	4	16	5	31	0	3	111	19	0	0	60	0	0	13	52	0	160	31	0	38	122	921	166 ·666	1 ·433	2 ·388
		2d ,,	868	0	0	0	1	5	20	6	51	0	2	197	54	0	0	38	0	0	64	74	0	137	51	0	51	117				
	Died......	1st half.	11	0	0	0	0	0	1	0	2	0	0	1	0	0	0	4	0	0	0	1	0	1	1	0	0	0				
		2d ,,	11	0	0	0	0	0	0	0	4	0	0	1	1	0	0	0	0	0	0	0	0	1	2	0	1	1				
1837	Admitted.	1st half.	733	0	0	0	0	8	12	9	44	0	8	141	59	5	3	42	0	0	31	69	0	82	33	0	47	140	964	167 ·427	2 ·726	4 ·564
		2d ,,	881	2	0	0	11	7	14	15	125	0	17	211	36	0	2	48	0	0	33	50	0	94	39	0	38	139				
	Died......	1st half.	11	0	0	0	0	0	0	0	5	0	0	1	2	1	0	1	0	0	0	0	0	0	1	0	0	0				
		2d ,,	33	2	0	0	5	0	0	0	15	0	0	4	1	0	0	2	0	0	0	1	0	1	0	0	0	2				
1838	Admitted.	1st half.	816	1	0	0	8	12	13	18	45	0	16	120	10	1	0	38	0	0	8	74	0	146	80	0	52	174	908	184 ·251	1 ·673	3 ·083
		2d ,,	857	0	2	0	2	2	19	5	60	0	16	112	6	1	0	42	0	0	51	79	0	150	60	0	64	186				
	Died......	1st half.	13	1	0	0	4	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	0	1	0	0	3				
		2d ,,	15	0	0	0	0	0	0	0	9	0	0	0	0	0	0	1	0	0	0	0	0	1	3	0	0	1				

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Table No. 23.—Europeans.—Abstract of the preceding Returns, shewing the Total number of Admissions, and Deaths, &c. from 1829 *to* 1838.

	Admissions and Deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	,, continued.	,, intermittent.	,, remittent.	Guinea worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & injuries.	Other Complaints.
Aggregate Strength. 8,922.																										
1829 to 1838. Admitted. 1st half.	7,359	13	1	0	217	51	68	202	695	0	49	948	152	87	3	430	2	0	344	333	0	938	262	0	632	1,932
2d half.	7,785	9	2	0	39	28	98	81	802	0	53	1,140	218	93	2	483	5	0	740	358	0	1,097	282	1	562	1,692
Total..	15,144	22	3	0	256	79	166	283	1,497	0	102	2,088	370	180	5	913	7	0	1,084	691	0	2,035	544	1	1,194	3,624
Died... .. 1st half.	198	9	0	0	67	0	1	0	45	0	0	18	2	5	0	19	0	0	1	6	0	1	8	0	0	16
2d half.	153	6	0	0	8	0	1	0	60	0	0	15	2	5	0	21	0	0	0	2	0	5	12	0	1	15
Total..	351	15	0	0	75	0	2	0	105	0	0	33	4	10	0	40	0	0	1	8	0	6	20	0	1	31
Average annual per centage of sick to strength.	169·737	0·246	0·033	0	2·369	0·885	1·860	3·171	16·778	0	1·143	23·402	4·147	2·017	0·056	10·233	0.078	0	12·149	7·744	0	22·808	6·097	0·011	13·382	40·618
Do. of deaths to sick treated.	2·317	68·181	0	0	29·296	0·000	1·204	0·000	7·014	0	0·000	1·580	1·081	5·555	0·000	4·381	0·000	0	0·092	1·157	0	0·294	3·676	0·000	0·083	0·855
Do. of deaths to strength.	3·934	0·168	0	0	0·840	0·000	0·022	0·000	1·176	0	0·000	0·369	0·044	0·112	0·000	0·448	0·000	0	0·011	0·089	0	0·067	0·224	0·000	0·011	0·347

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Table No. 24.—Return of sick of the Native Troops, exhibiting the half yearly Admissions and Deaths from the principal diseases, and those which have been either Epidemic or Endemic, during the period of ten years, from 1829 to 1838 inclusive.

Years.			Admissions and Deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	,, continued.	,, intermittent.	,, remittent.	Guinea worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small Pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & Injuries.	Other Complaints.	Average strength each year.	Annual per centage of sick to strength.	Annual per centage of deaths to sick treated.	Annual per centage of deaths to strength
1829	Admitted.	1st half.	1,898	4	0	0	265	0	0	101	38	0	0	37	517	5	0	4	1	0	14	125	0	55	12	0	121	599	6,819	53 ·145	5 ·491	2 ·918
		2d ,,	1,726	0	0	0	20	0	0	54	41	0	0	55	468	3	0	3	1	0	45	207	0	65	20	0	145	650				
	Died......	1st half.	150	1	0	0	123	0	0	5	5	0	0	2	5	1	0	1	0	0	0	1	0	0	1	0	0	11				
		2d ,,	43	0	0	0	17	0	0	2	1	0	0	0	7	2	0	1	0	0	0	4	0	0	4	0	0	5				
1830	Admitted.	1st half.	2,088	0	0	0	70	0	0	85	38	0	0	43	464	4	0	5	3	0	51	171	0	53	15	0	203	883	7,199	53 ·229	2 ·792	1 ·486
		2d ,,	1,744	5	0	0	1	0	0	55	20	0	3	53	401	0	0	2	0	0	37	208	0	44	22	0	204	689				
	Died......	1st half.	81	0	0	0	38	0	0	4	4	0	0	0	8	1	0	1	0	0	0	1	0	1	7	0	1	15				
		2d ,,	20	4	0	0	0	0	0	2	1	0	0	0	2	0	0	2	0	0	0	2	0	0	6	0	0	7				
1831	Admitted.	1st half.	1,560	1	0	0	12	0	0	80	21	0	37	67	249	6	0	3	4	0	27	113	0	56	12	0	118	724	7,006	41 ·378	2 ·552	1 ·056
		2d ,,	1,339	0	0	0	19	0	0	29	21	0	54	42	115	5	0	3	4	0	91	129	0	44	12	0	125	646				
	Died......	1st half.	42	0	0	0	8	0	0	3	1	0	0	3	3	0	0	0	0	0	0	2	0	1	4	0	3	14				
		2d ,,	32	0	0	0	10	0	0	4	1	0	0	0	1	1	0	0	0	0	0	2	0	0	4	0	1	8				
1832	Admitted.	1st half.	1,878	3	0	0	62	0	0	54	10	0	112	40	156	17	0	5	4	0	32	138	0	43	6	0	228	968	7,622	51 ·049	2 ·749	1 ·403
		2d ,,	2,013	0	0	0	29	0	0	73	27	0	144	28	204	8	0	2	8	0	65	164	0	40	7	0	246	968				
	Died......	1st half.	56	3	0	0	26	0	0	3	1	0	0	2	3	2	0	0	0	0	0	1	0	0	2	0	0	13				
		2d ,,	51	0	0	0	10	0	0	6	3	0	2	2	4	3	0	0	0	0	0	0	0	0	3	0	3	15				
1833	Admitted.	1st half.	2,078	1	0	0	169	0	0	74	44	0	591	85	597	1	0	3	5	0	63	127	0	46	7	0	196	1039	8,313	61 ·313	4 ·492	2 ·754
		2d ,,	2,119	0	0	0	62	0	0	80	65	0	269	68	232	0	0	6	4	0	55	138	0	62	11	0	172	895				
	Died......	1st half.	138	0	0	0	76	0	0	7	9	0	7	1	10	0	0	1	1	0	0	2	0	0	1	0	0	23				
		2d ,,	91	0	0	0	33	0	0	6	11	0	1	0	12	0	0	1	0	0	0	2	0	1	1	0	2	21				
1834	Admitted.	1st half.	1,658	0	9	4	33	122	1	26	27	0	212	70	160	17	5	5	3	0	22	117	4	110	42	1	164	504	7,577	48 ·330	3 ·113	1 ·504
		2d ,,	2,001	3	12	0	3	71	3	52	38	3	189	78	391	29	3	2	9	0	71	121	3	133	56	8	191	605				
	Died......	1st half.	67	0	1	0	22	0	0	4	1	0	3	3	10	0	0	1	0	0	0	5	1	1	7	0	1	7				
		2d ,,	47	2	5	0	1	0	0	3	8	0	1	0	6	0	0	0	0	0	0	1	0	0	9	1	0	10				
1835	Admitted.	1st half.	2,161	0	14	1	0	171	2	44	31	2	182	102	339	20	28	2	7	0	143	177	0	91	40	0	231	544	7,754	67 ·358	1 ·646	1 ·109
		2d ,,	3,062	1	21	1	2	335	3	62	37	1	330	87	914	19	2	8	5	0	90	183	0	111	53	1	199	607				
	Died......	1st half.	35	0	3	0	0	0	0	1	3	0	0	1	3	2	0	0	0	0	0	1	0	0	10	0	1	10				
		2d ,,	51	1	1	0	0	0	1	0	6	1	1	5	21	4	0	2	0	0	0	2	0	1	0	0	1	4				
1836	Admitted.	1st half.	2,680	2	18	2	0	368	10	64	17	0	260	53	694	24	28	5	2	0	85	141	1	100	60	2	160	584	6,785	78 ·644	1 ·405	1 ·105
		2d ,,	2,656	0	15	3	1	288	1	73	20	0	199	26	618	27	6	8	1	0	160	210	0	69	43	0	186	663				
	Died......	1st half.	42	2	2	0	0	0	0	2	3	0	1	7	3	3	0	2	0	0	0	2	0	0	8	0	0	7				
		2d ,,	33	0	2	0	1	0	0	7	1	0	1	1	4	1	0	0	0	0	1	1	0	0	4	0	0	9				
1837	Admitted.	1st half.	2,325	1	7	2	0	171	2	62	39	0	306	33	491	32	24	4	2	0	75	151	5	76	49	0	193	600	5,724	82 ·232	3 ·590	2 ·952
		2d ,,	2,382	1	4	0	154	182	3	145	89	0	268	50	358	17	24	3	5	0	82	180	0	64	42	1	192	518				
	Died......	1st half.	33	1	2	1	0	0	0	1	4	0	2	4	2	2	0	0	0	0	0	3	0	0	5	0	0	6				
		2d ,,	136	0	1	0	85	0	1	4	9	0	4	2	4	1	0	0	0	0	0	1	0	1	7	0	2	14				
1838	Admitted.	1st half.	2,284	1	1	0	29	205	2	91	29	0	337	51	422	34	33	0	7	0	205	193	5	68	32	1	184	354	6,343	70 ·707	1 ·694	1 ·198
		2d ,,	2,201	2	10	0	25	189	0	88	39	1	362	34	340	13	7	3	4	0	85	245	1	97	49	3	185	419				
	Died......	1st half.	33	0	0	0	12	0	0	1	4	0	1	1	2	2	0	0	1	0	0	0	0	0	0	0	1	8				
		2d ,,	43	2	1	0	11	0	0	4	1	0	1	1	7	0	0	0	0	0	0	6	0	0	6	0	0	3				

SOUTHERN DIVISION.

Table No. 25.—Natives.—Abstract of the preceding Returns, shewing the Total number of Admissions, and Deaths, &c. from 1829 *to* 1838.

		Admissions and Deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhoea.	Dysentery.	Elephantiasis.	Fever ephemeral.	,, continued.	,, intermittent.	,, remittent.	Guinea worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & injuries.	Other Complaints.
Aggregate Strength, 71,142.																											
1829 to 1838.	Admitted. 1st half.	21,510	13	49	9	640	1037	17	681	294	2	2·037	581	4,009	160	118	36	38	0	717	1,453	15	698	275	4	1,828	6,799
	Admitted. 2d half.	21,246	12	62	4	325	1065	10	711	406	5	1·818	521	3,931	121	42	40	41	0	781	1,785	4	729	315	13	1,845	6,660
	Total..	42,756	25	111	13	965	2102	27	1.392	700	7	3.855	1,102	7,940	281	160	76	79	0	1,498	3,238	19	1,427	590	17	3,673	13,459
	Died... .. 1st half.	683	7	8	1	305	0	0	31	35	0	14	24	49	13	0	6	2	0	0	18	1	3	45	0	7	114
	Died... .. 2d half.	553	9	10	0	168	0	2	38	42	1	11	11	68	12	0	6	0	0	1	21	0	3	44	1	9	96
	Total..	1·236	16	18	1	473	0	2	69	77	1	25	35	117	25	0	12	2	0	1	39	1	6	89	1	16	210
Average annual per centage of sick to strength.		60·099	0·035	0·156	0.018	1·356	2·954	0·037	1·956	0.983	0·009	5·418	1·549	11·160	0·394	0·224	0·106	0·111	0	2·105	4·551	0·026	2·005	0·829	0·023	5·162	18·918
Do. of deaths to sick treated.		2·890	64·000	16.216	7.692	49·015	0·000	7·407	4.956	11·000	14·285	0·648	3·176	1·473	8·896	0·000	15·789	2·531	0	0·066	1·204	5·263	0·420	15·084	5·882	0·435	1·560
Do. of deaths to strength.		1·737	0·022	0·025	0·001	0·664	0·000	0·002	0·096	0·108	0·001	0·035	0·049	0·164	0.035	0·000	0·016	0·002	0	0·001	0·054	0·001	0·008	0·125	0·001	0·022	0·295

SOUTHERN DIVISION.

No. 26.—Table exhibiting the Number of Admissions and Deaths from each Class of Disease, for 5 years.

EUROPEAN TROOPS.

CLASSES.	DISEASES.	1834 to 1838. Aggregatestrength 4,502. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions and Deaths from each class of Disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
Fevers.....	Febris ephemera	32	0	46	0								
	,, intermitt quotid....	55	1	43	0	706	15	966	13	1672	28	37 ·139	1 ·671
	,, tertian...	41	1	96	2								
	,, remittens..	6	2	4	0								
	,, continua..	572	11	777	11								
	Cholera........	10	6	14	5	10	6	14	5	24	11	0 ·533	45 ·833
Diseases of the abdominal viscera.......	Dysenteria acuta	291	19	351	35	296	21	351	36	650	57	14 ·438	8 ·769
	,, chronica..	5	2	3	1								
	Diarrhœa.......	37	0	33	0								
	Colica.........	25	0	28	0								
	Obstipatio......	21	0	24	0								
	Hæmorrhois....	26	0	31	0								
	Enteritis........	9	0	7	0	164	3	159	0	323	3	7 ·174	0 ·928
	Peritonitis......	0	0	0	0								
	Gastritis........	18	2	7	0								
	Dyspepsia......	28	1	29	0								
	Hepatitis acuta.	208	7	231	7	232	8	249	7	481	15	10 ·684	3 ·118
	,, chronica...	24	1	18	0								
Diseases of the Lungs and Heart.	Catarrhus......	82	1	81	3								
	Asthma........	9	2	3	0								
	Phthisis pulmonalis..........	1	0	1	1								
	Hœmoptysis....	0	0	3	1								
	Pleuritis........	0	0	0	0	197	5	210	6	407	11	9 ·040	2 ·702
	Pneumonia.....	93	2	101	1								
	Carditis........	0	0	1	0								
	Palpitatio......	6	0	8	0								
	Dyspnœa......	6	0	12	0								
Diseases of the Brain.	Apoplexia.....	4	2	7	5								
	Epilepsia......	14	1	10	0								
	Paralysis.......	17	1	10	1								
	Cephalalgia.....	28	0	32	1								
	Phrenitis......	0	0	0	0								
	Ictus solis......	0	0	0	0								
	Amentia........	1	0	2	0	132	5	160	9	292	14	6 ·486	4 ·794
	Mania..........	0	0	0	0								
	Hydrophobia...	0	0	1	1								
	Delirium Tremens.........	13	1	29	0								
	Ebrietas........	55	0	60	1								
Diseases of the Eye..	Morbi oculorum........	99	0	235	0	99	0	235	0	334	0	7 ·418	0 ·000
do. ,, Skin.	,, cutis.......	51	0	30	0	51	0	30	0	81	0	1 ·799	0 ·000
EruptiveFevers......	Variola.........	0	0	0	0								
	Varicella.......	1	0	0	0								
	Rubeola........	0	0	0	0	6	0	4	1	10	1	0 ·222	10 ·00
	Scarlatina......	0	0	0	0								
	Erysipelas......	5	0	4	1								
Dropsies....	Anasarca.......	8	1	5	0								
	Ascites.........	1	0	0	0	9	1	5	0	14	1	0 ·310	7 ·142
	Hydrothorax...	0	0	0	0								
Rheumatic affections.	Rheumatismus acutus........	207	2	255	2								
	,, chronicus.	22	1	24	0	229	3	279	2	508	5	11 ·283	0 ·984
	Neuralgia......	0	0	0	0								
	Odontalgia......	0	0	0	0								
Venereal affections...	Syphilis primitiva.........	371	0	491	4								
	,, consecutiva.	16	1	10	1								
	Gonorrhœa.....	436	0	401	0								
	Hernia humoralis..........	31	0	26	0	858	1	931	5	1789	6	39 ·737	0 ·335
	Strictura urethræ.........	4	0	3	0								
Specific diseases.....	Atrophia........	1	0	3	0								
	Beriberi........	0	0	0	0								
	Elephantiasis...	0	0	0	0								
	Lepra..........	0	0	0	0								
	Dracunculus....	3	0	2	0	6	1	11	0	17	1	0 ·377	5 ·882
	Ulcus phagedenicum........	0	0	1	0								
	Scrophula......	1	0	4	0								
	Scorbutus......	1	1	1	0								
Punishment.	Punitio.........	7	0	8	0	7	0	8	0	15	0	0 ·333	0 ·000
Wounds and injuries...	Fractura........	7	0	7	0								
	Luxatio........	1	0	6	0								
	Subluxatio......	23	0	10	0								
	Vulnus sclopitorum........	3	0	1	0	316	0	255	1	571	1	12 ·683	0 ·175
	,, incisum...	46	0	43	0								
	Contusio........	231	0	178	1								
	Ambustio......	5	0	10	0								
Otherdiseases, includingUlcus, Phlogosis, &c............		498	0	482	3	498	0	482	3	*980	+3	21 ·768	0 ·306
Total......		3816	69	4352	88	3816	69	4352	88	8168	157	181 ·450	1 ·922

Average per centage of deaths to strength, during these five years, has been 3·487.

* Of this number were

Phlogosis............	413	1
Do. do. Ulcers.........	222	1
Do. do. Bubo simplex.	160	0
Total.....	795	2

+ The deaths under this head, include besides the 2 accounted for in the preceding note, 1 from icterus.

No. 30.—*Table shewing the amount of diseases and deaths from the principal classes of disease, for the period of five years, from* 1834 *to* 1838 *inclusive, with the proportion of admissions from each to the total of sick treated, and of deaths to the total mortality.*

		Fevers.		Cholera.		Dysentery.		Abdominal complaints.		Diseases of the Liver.		Diseases of the Lungs.		Diseases of the Brain.		Dropsies.		Rheumatic affections.		Venereal complaints.	
		Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop,	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.
European Troops.																					
Total Admissions....	8,168	1672	$\frac{1}{5}$	24	$\frac{1}{340}$	650	$\frac{2}{25}$	323	$\frac{1}{25}$	481	$\frac{1}{17}$	407	$\frac{1}{20}$	292	$\frac{1}{28}$	14	$\frac{1}{583}$	508	$\frac{1}{16}$	1789	$\frac{2}{9}$
,, Deaths........	157	28	$\frac{2}{11}$	11	$\frac{1}{14}$	57	$\frac{4}{11}$	3	$\frac{1}{52}$	15	$\frac{1}{10}$	11	$\frac{1}{14}$	14	$\frac{1}{11}$	1	$\frac{1}{157}$	5	$\frac{1}{31}$	6	$\frac{1}{36}$
Native Troops.																					
Total Admissions....	23,413	8118	$\frac{1}{3}$	247	$\frac{1}{95}$	375	$\frac{2}{125}$	1590	$\frac{4}{59}$	40	$\frac{1}{585}$	464	$\frac{1}{50}$	251	$\frac{1}{93}$	70	$\frac{1}{334}$	1749	$\frac{1}{13}$	919	$\frac{2}{51}$
,, Deaths........	520	117	$\frac{2}{9}$	132	$\frac{1}{4}$	40	$\frac{1}{13}$	48	$\frac{4}{43}$	5	$\frac{1}{104}$	56	$\frac{1}{9}$	28	$\frac{2}{37}$	12	$\frac{1}{43}$	21	$\frac{1}{25}$	3	$\frac{1}{173}$

No. 31.—*Table exhibiting the per centage of admissions from the same classes of disease to the strength, of deaths to sick treated, and of deaths to strength, both amongst European and Native Troops.*

	Fevers.		Cholera.		Dysentery.		Abdominal complaints.		Diseases of the Liver.		Diseases of the Lungs.		Diseases of the Brain.		Dropsies.		Rheumatic affections.		Venereal complaints.	
	Ad. & deaths.	Per-cent-a ge.	Ad. & deaths.	Per-cent. age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths	Per-cent-age.	Ad. & deaths.	Per-cent-age	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per. cent-age.
European Troops. STRENGTH, 4,502																				
Per centage of sick to strength.	1672	37·139	24	0·533	650	14·438	323	7·174	481	10·684	407	9·040	292	6·486	14	0·310	508	11·283	1789	39·733
,, of deaths to sick........	28	1·674	11	45·833	57	8·769	3	0·928	15	3·118	11	2·702	14	4·794	1	7·142	5	0·984	6	0·573
,, of deaths to strength...	28	0·621	11	0·244	57	1·266	3	0·066	15	0·333	11	0·244	14	0·310	1	0·022	5	0·111	6	0·133
Native Troops. STRENGTH, 33,667.																				
Per centage of sick to strength.	8118	24·112	247	0·733	375	1·113	1590	4·722	40	0·118	464	1·378	251	0·745	70	0·207	1749	5·195	919	2·729
,, of deaths to sick......	117	1·441	132	53·441	40	10·666	48	3·018	5	12·500	58	12·500	28	11·155	12	17·142	21	1·200	3	0·326
,, of deaths to strength....	117	0·347	132	0·392	40	0·118	48	0.142	5	0·014	58	0·172	28	0·083	12	0·035	21	0 062	3	0·008

REMARKS ON THE GENERAL TABLES.

Remarks on the general tables of diseases.

The general table No. 22, for European troops, includes the sick of H. M.'s. Regiment and one Company of Artillery at Trichinopoly, and also of a small detachment from the latter which is located at Palamcottah; it exhibits the admissions into hospital, and the mortality from the most important diseases each half year, for a period of ten years from 1829 to 1838 inclusive; it also points out the annual per centage of sick to strength, of deaths to sick treated and of deaths to strength; the average of these, as shewn in the abstract table No. 23, and 3·934 being 169·737, 2·317 respectively.

The average of admissions into hospital will be observed to hold pretty uniform, nor has the mortality varied very much, except in 1832 when it was nearly doubled, both as regards the number of deaths to sick treated, and also to the numerical strength, and which increase it will also be observed was occasioned solely by cholera; the disease attacked H. M.'s. 54th Regiment in the month of March of that year, shortly after their arrival at Trichinopoly, and no less than 149 cases, with 37 deaths, occurred.

In 1833, 35 and 37, the mortality was increased somewhat above the average, in respect to the per centage of deaths to strength, but not from epidemic disease, and in 1835 the admissions are considerably above the average, caused principally by fever and dysentery.

On referring to the general abstract table No. 23, it will be observed, that the total admissions have been 15,144, and the total deaths 351, from an aggregate strength of 8,922 men.

The most prevalent diseases have been *fevers, dysentery, hepatitis, venereal complaints, ophthalmy, rheumatism* and *thoracic diseases:* and the most fatal have been *dysentery,*

cholera, fever, hepatitis and thoracic diseases; the exact per centage of each of which to the strength is noted in the table. The solitary death under the head ophthalmy occurring in 1832, it may be mentioned, was the result of an attack of delirium tremens.

The admissions from fever and dysentery have been most numerous in the second half-yearly period, and the latter disease has been greatly more fatal during this season of the year, while cholera has occasioned a marked increase in the total mortality, during the first half-yearly period, a circumstance coinciding with the remark of Superintending Surgeon Currie, long resident in this division, viz., "that cholera when it prevails at Trichinopoly in an epidemic form, occurs almost invariably about the beginning of the year, after the fall of rain of the north-east monsoon, but while the wind continues to blow steadily from that quarter."

The tables No. 24 and 25, shew the amount of the same diseases and mortality, which have occurred amongst the Native troops at head quarters, and at the various out-stations in this division, during the same period of ten years.

The total number treated has been 42,756, and 1236 deaths have taken place, in an aggregate strength of 71,142 men. The average per centage of sick to strength has been 60·099, of deaths to sick treated 2·890, and of deaths to strength 1·737.

Fevers rheumatism, cutaneous diseases, ophthalmy, and *syphilis* have occasioned the most numerous admissions, and the mortality has chiefly resulted from *cholera, fever, diarrhœa* and *dysentery,* and *thoracic* diseases.

The average of sickness has been pretty uniform during the decennial period, and the amount in each of the half-yearly periods is nearly similar; but the mortality is considerably greater here as amongst the European troops in the first half-year, and it will be observed to be occasioned also exclusively by cholera. In 1829, 33 and 37, this disease

prevailed more or less in an epidemic form, and increased the per centage of deaths, not only to the sick treated, but also to the strength a good deal above the average already stated. In February and March 1829, 231 cases, with 94 deaths occurred in the 15th Regiment N. I., while marching through the division, and in 1833 in the month of February 64 cases, with 24 deaths, happened in the 44th N. I. at Trichinopoly.

With regard to fever, the great proportion of cases of the intermittent type will not excite surprise when it is considered that in many of the stations, the exciting causes of this disease are known to abound. During the months of June, July and August, whilst westerly winds prevail, fever (ephemeral and intermittent) is common at Trichinopoly, but it has been observed invariably to become more so, on the setting in of the north-east monsoon; at which time exposure to the cold winds during the night with insufficient clothing conduce to the increase of fever, though from the absence of any noxious exhalations from the ground, it is of a simple form and by no means fatal.

The tabular statements No. 28 and 29, have been framed similarly to those given in the preceding divisions, from the abstract returns No. 23 and 25, and exhibit much information relative to the corresponding diseases amongst both European and Native troops.

The other tables No. 26 and 27, exhibit the admissions and deaths from each disease in the various classes therein mentioned, during a period of five years from 1834 to 1838, as in the two preceding reports; the total sick from each class is also shewn, with the mortality, and the per centage of admissions to strength, and of deaths to sick treated. Amongst the European troops, the greatest number of admissions have been from the classes of *fever*, *bowel complaints* including *dysentery*, and *hepatitis*, *venereal complaints*, *rheumatic affections*, *diseases of the lungs and of the brain*, *wounds and accidents and ophthalmy*; and the most fatal have been *abdo-*

minal complaints, fevers, cholera, diseases of the brain and of the lungs, rheumatism and *venereal affections.*

The per centage of sick to strength during the five years, has been 181·450, of deaths to sick treated 1·922, and of deaths to strength 3·487.

In table No. 27, for Native troops, the greatest number of admissions have been from the classes of *fevers, bowel complaints, rheumatic affections, diseases of the skin, wounds and injuries,* and *venereal affections;*—and the greatest mortality has resulted from *cholera, fevers, abdominal complaints and diseases of the lungs, and of the brain.*

The admissions into hospital during the five years have averaged 69·542 per cent on the strength, the deaths to sick treated 2·220, and the deaths to strength 1·544.

The tabular statements No. 30 and 31 have been framed from these two returns No. 26 and 27, in the same manner as in the reports of the Presidency and Centre divisions, and exhibit at one view, the proportion and per centage of admissions and deaths, from the principal classes of disease.

As the general table No. 22. for Europeans, includes also the sick of the Artillery at Trichinopoly, the following have been framed to exhibit the admissions and deaths separately, and for the purpose of comparison, as regards the most important diseases. The sick of the detachment of Artillery at Palamcottah is included, but this is not considered to vitiate the general results. The table for H. M.'s. troops comprises eight complete years, when the same regiment occupied the station during a period of 12 months; that for the Artillery embraces ten years, as the number being very limited, it was thought proper to extend it to have larger numbers, and so to obtain more accurate inferences.

	Table No. 32. H. M.'s. Regiment, *Aggregate Strength* 6234. 1829, 31, 33——37 and 1839.				Table No. 33. H. C. Artillery *Agg. Str.* 955. From 1832 to 1841 inclusive.			
	Admitted.	Died.	Per centage of sick to strength.	Per centage of deaths to sick.	Admitted.	Died.	Per centage of sick to strength.	Per centage of deaths to sick.
Fevers....................	2269	34	36 ·397	1 ·498	342	4	35 ·811	1 ·169
Cholera....................	50	27	0 ·802	54 ·000	3	2	0 ·314	66 ·666
Diarrhœa..................	214	0	3 ·432	0 ·000	84	1	8 ·795	1 ·190
Dysenteria acuta............	1276	95	20 ·468	7 ·445	106	7	11 ·099	6 ·603
,, Chronica........ ,....	31	7	0 ·497	22 ·580	9	0	0 ·942	0 ·000
Hepatitis acuta............	574	23	9 ·207	4 ·006	152	3	15 ·916	1 ·973
,, Chroniea..............	49	6	0 ·786	12 ·244	27	0	2 ·827	0 ·000
Catarrhus..................	165	4	2 ·646	2 ·424	69	1	7 ·225	1 ·449
Phthisis pulmonalis..	10	5	0 ·160	50 ·000	4	1	0 ·418	25 ·000
Hœmoptysis................	3	0	0 ·048	0 ·000	2	0	0 ·209	0 ·000
Pneumonia..................	235	2	3 ·769	0 ·851	12	0	1 ·25[illegible]	0 ·000
Apoplexia..................	29	16	0 ·465	55 ·172	0	0	0 ·000	0 ·000
Paralysis..................	31	3	0 ·497	9 ·677	1	0	0 ·104	0 ·000
Delirium Tremens..........	45	2	0 ·721	4 ·444	16	0	1 ·675	0 ·000
Rheumatismus aeutus......	388	1	6 ·223	0 ·257	97	0	10 ·157	0 ·000
,, Chronieus..	43	0	0 ·689	0 ·000	37	1	3 ·874	2 ·702
Other diseases........, ...	6051	12	97 ·064	0 ·198	1297	8	135 ·811	0 ·616
Total....	11463	237	183 ·878	2 ·067	2258	28	236 ·439	1 ·240

Per eentage of deaths to strength 3·801.
H. M.'s. troops.

Per centage of deaths to strength 2·931.
H. C. troops.

SOUTHERN DIVISION.

No. 34—*Table exhibiting the sickness and mortality amongst the OFFICERS of H. M.'s. Regiments at Trichinopoly, during a period of eight years.**

Aggregate Strength 271 CLASSES	DISEASES.	Admitted.	Died.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
Fevers.	Febris intermittens quot..........	7	0	120	1	44 ·280	0 ·853
	,, remittens....	7	0				
	,, com. continua.........	106	1				
	Cholera........	1	1	1	1	0 ·369	100 ·000
Diseases of the abdominal viscera......	Diarrhœa......	10	0	73	1	26 ·937	1 ·369
	Dysenteria......	12	1				
	Obstipatio......	9	0				
	Hœmorrhois....	2	0				
	Dyspepsia......	7	0				
	Icterus.........	2	0				
	Hepatitis.......	31	0				
Diseases of the Lungs.	Catarrhus......	15	0	18	0	6 ·642	0 ·000
	Asthma........	1	0				
	Pneumonia.....	2	0				
Diseases of the Brain.	Apoplexia.......	1	0	11	3	4 ·059	27 ·272
	Epilepsia.......	1	0				
	Paralysis.......	4	1				
	Concussio......	1	0				
	Amentia........	1	0				
	Delirium Tremens......	3	2				
Rheumatic affections.	Rheumat acutus et chronicus..	22	0	22	0	8 ·118	0 ·000
Venereal affections..	Syphilis primitiva..........	5	0	18	0	6 ·642	0 ·000
	Gonorrhœa.....	10	0				
	Hernia humoralis.........	3	0				
Diseases of the eye...	Morbi oculorum	8	0	8	0	2 ·952	0 ·000
do. Skin..	cutis............	2	0	2	0	0 ·738	0 ·000
	Other diseases..	141	0	141	0	52 ·029	0 ·000
	Total..	414	6	414	6	152 ·767	1 ·449

Note—Per centage of deaths to strength 2·214

* Viz. 1829, 31, 33, 34, 35, 36, 37 and 1839.

SOUTHERN DIVISION.

No. 35—*Table exhibiting the sickness and mortality amongst the* WOMEN *of H. M.'s. Regiments at Trichinopoly, during the same period of eight years.*

Aggregate Strength. 734 CLASSES	DISEASES.	Admitted.	Died.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
Fevers......	Febris remittens	19	2	347	6	47 ·275	1 ·729
	,, intermit quot.	3	0				
	,, com. continua..........	325	4				
	Cholera..........	8	2	8	2	1 ·089	25 ·000
Diseases of the abdominal viscera......	Diarrhœa.......	15	0	189	7	25 ·749	3 ·703
	Dysenteria.....	94	5				
	Colica..........	28	0				
	Dyspepsia......	7	0				
	Obstipatio......	11	0				
	Splenitis........	5	0				
	Enteritis........	1	0				
	Gastritis........	7	1				
	Hepatitis........	21	1				
Diseases of the Lungs.	Catarrhus......	4	0	13	1	1 ·771	7 ·692
	Pneumonia......	9	1				
Diseases of the Brain.	Apoplexia......	3	3	5	3	0 ·681	60 ·000
	Hysteria........	2	0				
Rheumatic affections.	Rheumatismus..	5	0	5	0	0 ·681	0 ·000
Diseases of the eye...	Morbi oculorum	185	0	185	0	25 ·204	0 ·000
do. Skin..	,, cutis........	3	0	3	0	0 ·408	0 ·000
	Other diseases..	101	*1	101	1	13 ·760	0 ·990
	Total..	856	20	856	20	116 ·618	2 ·336

NOTE—Per centage of deaths to strength 2·724.
* A severe contusion.

SOUTHERN DIVISION.

Statement shewing the extent of accommodation, Dietary, Allowances for Clothing, Hours of labour &c. in the several jails throughout the Provinces of the Southern Division.

JAIL OF	Number of Prisoners the Prison is capable of containing in separate sleeping cells.	Number of Prisoners the prison is capable of containing, where more than one prisoner sleeps in one cell.	Dietary or other weekly allowance, and weekly cost per head.	Allowance of clothing and bedding, and cost per head.	Description of employment and hard labour.	Hours of labour and of exercise.
SALEM.	35	522	One Seer of rice, and 4 pice for curry stuff &c. are allowed daily per head, the cost of which per week is annas 5, and pice 10; no weekly allowance to the Prisoners for Mutton &c.	A cloth worth annas 5, is allowed per head once every 6 months, and a cumbly worth annas 6 is allowed once a year, no allowance for bedding.	Cleaning and repairing the public roads, as well as working in the neighbourhood of the Jail, and Court building.	The Pirsoners are sent out daily (Sunday excepted) at 7 o'clock in the morning, to work until 5 in the evening, they are allowed to rest for one hour, between 12 and 1 in the afternoon.
COIMBATORE.	8 Prisoners in the eight Solitary Cells.	275 Prisoners at 15 prisoners per cell if free accommodation is allowed, or 360 at 20 per cell if closely confined there being 18 large cells.	5 Annas 10 Pice each head per week; for those who eat cholum, at 100 Rs. weight of cholum valued 6 pice, and 4 pice worth of curry stuff &c. per diem, 6 annas and 10½ pice per head for those, who eat coarse rice, at 80 Rs. weight of rice, valued at 7¾ pice, and 4 pice worth of curry stuff per diem, 7 annas per head for sick who eat fine rice, at 75 Rs. weight of rice, valued at 8 pice, and 4 pice worth of curry stuff &c. per diem.	Two cloths each of 7 annas worth, and 1 Cumbly valued at 12 annas each head, per annum.	Repairing high roads, public streets, tanks, &c., making *baskets and bringing materials for the same. * This latter employment is resorted to, only in a few instances.	From 7 A. M. to 4 P. M.
TINNEVELLY.	The Jail at present consists of a large choultry considerable additions and improvements have been sanctioned by Government with a view to converting the choultry into an efficient jail.	The above remarks apply to this head also.	80 Rs. weight of rice, and 4 small pice for vegetables, for each man per diem; the cost for the week is about 7 annas and 9 pice.	Each prisoner is allowed 1 Cumbly (1¼ Rupee) 2 Cloths (1 Rupee) total cost 2 Rupees and 4 Annas.	Repairing roads, cutting wood working at the forge, and on public buildings &c.	The convicts leave jail at 7 A.M. and return at 4 P. M. In the interval they rest from 12 to 1 o'clock.
MADURA.	There are 3 solitary cells, and 6 large wards	400	80 Rs. weight of rice with 4 pice worth of curry stuff per diem for sentenced prisoners at an average of annas 5 pice 2 and Cts 30 per head, those under trial are on diminished allowance.	Each is allowed 9 Annas and 5 Pice every 6 months for clothing.	Paper making, and common employment inside the jail, labour on the roads, and pulling down the ramparts.	From 7 A.M. to 5 P.M. every day, Sundays excepted.
COMBACONUM.	6	401	Weekly allowance—Daily ⅝ of a measure of rice or 80 Rs. weight, and 4 pice for wood Masauls and vegetables, cost weekly 5 annas 1 pice.	1 Cloth for six months 8 Annas. 3 Mats for do. 6 do. Total. 14 do.	Repairing public roads, making paper, and weaving cloths.	From 7 to 12 A. M. From 1 to ½ past 4 P. M.
NEGAPATAM.	Number of Prisoners 106. Number of Cells 7.	These cells being large 106 of the Prisoners sleep very comfortably in 4 of them: the remaining 3 are vacant.	6 annas and 7 pice per week for each.	2 Cloths, one Cumbly, and a Mat per Annum, value one Rupee and seven Annas.	They work on the roads, besides being occasionally employed in other public works.	From 7 A.M. to 5 P.M. Between these hours, they are allowed one hour to take rest viz. from 12 to 1 o'Clock.
TRICHINOPOLY.	In the inner jail where the convicted & condemned Prisoners are confined about 220 Prisoners can safely be confined viz. 12 large cells 14 to 15 men each 8 solitary cells adjoining these, 2 men each, & 4 cells on the south side about 30 men.	In the inner jail 220 men, in the outer jail, where the debtors and security prisoners are confined, and where also are 3 wards for an hospital, capable of holding about 25 sick, and ward for females about 100 more, in all 320 prisoners.	Prisoners allowed to buy a seer of meat every Sunday, out of their allowance. 80 Rupees weight of rice is allowed per diem and 60 for the sick; one-third of an anna cost per week 4 annas 9 pice.	One Cumbly and mat per Annum, a coarse cloth every half year, price one Rupee and three Annas.	Employed in the construction, and repairs of roads and bridges in the District, and Cantonment of Trichinopoly.	Leave the jail soon after 6 A.M. and employed at work until 12, and again from 1 to 4 P.M. are locked up at 9 P.M.

Table shewing the Number of Persons succcssfully vaccinated, from 1829 to 1838 inclusivc.

DISTRICT OR STATIONS.	Class and sex of Patients.						Total Vaccinated.	
	Christians.		Hindoos.		Mahomedans.			
	Males.	Femaels.	Males.	Females.	Males.	Females.	Males.	Females.
Salem..	802	761	9,039	8,314	559	387	10,400	9,462
Coimbatore	407	399	12,474	11,693	408	293	13,289	12,385
Travancore	3,115	3,323	7,480	6,145	1,371	836	11,966	10,304
Cochin..	3,404	2,695	5,958	5,066	587	419	9,949	8,180
Tinnevelly	3,169	2,712	6,867	5,474	454	282	10,490	8,468
Madura	1,949	1,727	15,895	13,867	569	373	18,413	15,967
Dindigul..	1,848	1,555	8,385	6,542	321	174	10,554	8,271
Ramnad	1,061	1,028	9,725	8,810	438	425	11,224	10,263
Tanjore	450	384	13,166	10,295	199	148	13,815	10,827
Combaconum..	741	621	16,174	15,167	1,004	673	17,919	16,461
Negapatam	466	403	16,962	14,681	750	660	18,178	15,714
Trichinopoly	2,661	2,079	9,479	7,381	935	682	13,075	10,142
Grand Total..	20,073	17,687	1,31,604	1,13,435	7,595	5,523	1,59,272	1,36,474

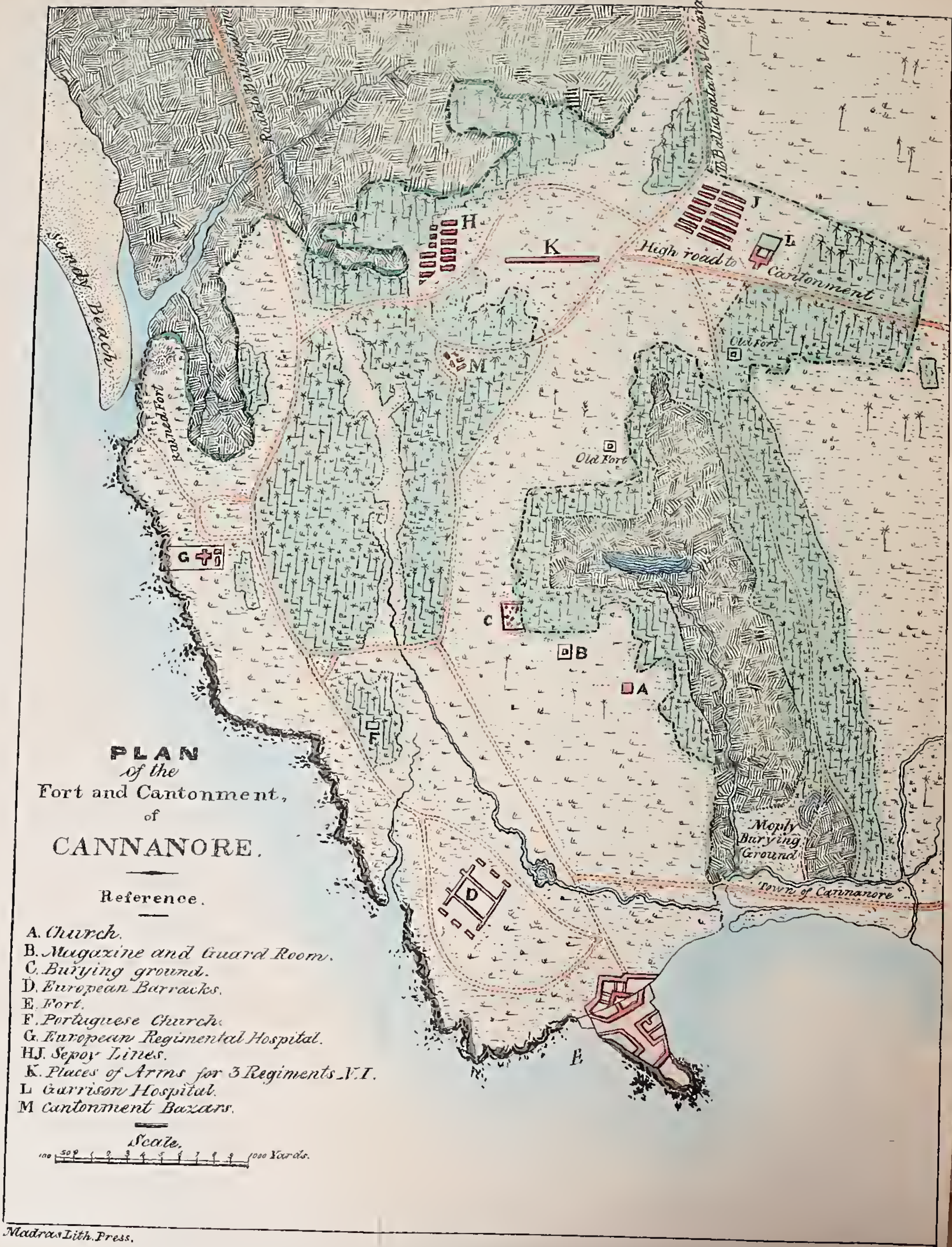
Number of Vaccinators in each District.

	1st Class Vaccinators.	2d Class Vaccinators.
Salem.	1	3
Coimbatore.	1	3
Travancore.	1	3
Cochin.	1	3
Tinnevelly.	1	3
Madura.	1	3
Dindigul.	1	3
Ramnad.	1	3
Tanjore.	1	3
Combaconum.	1	3
Negapatam.	1	3
Trichinopoly.	1	3
Total....	12	36

The number vaccinated in this Division during these ten years is 2,95,746; the whole expense incurred, amounts to Rupees 1,08,864 which gives an average of somewhat more than 36¾ Rupees per hundred, or 8¾ pence per head in English money.

Madras Lith. Press.

B. C. Reyel. Delt.



Madras Lith. Press.

B.C. Regel, Delr.

MALABAR AND CANARA.

Situation boundaries &c.

The Province of Malabar and Canara, commonly called the western provinces, forms a narrow slip of country of great length, but of inconsiderable breadth, situated between the 10th and 15th degrees of north latitude, and between 74° 10′, and 76° 50′, of east longitude; the province is bounded on the north, by the Portuguese territory of Goa, on the south, by Cochin in Travancore; on the east, by the great range of western ghauts, which separate them from the Mysore country and Coimbatore in the southern division, and on the west, its shores are washed by the Indian ocean. The coast runs diagonally in a south-easterly direction, from Sedashegur on its northern extremity, to Cochin on the south, several headlands, and small bays being formed along its tract; the general character of the country is flat, and sandy near the coast, being intersected by numerous mountain streams flowing into extensive back-waters, inland it rises more or less abruptly to the foot of the ghauts, which are no where more distant than forty miles from the sea, though in general approaching much nearer, presenting a surface estimated at 13,780 square miles, with a population of 2,063,174 souls.

The principal towns and stations in the provinces, are Cannanore the capital, and chief military station; Tellicherry, Calicut, and Mangalore; a description of the climate will be found in the detailed reports for the principal stations.

CANNANORE.

General description of the cantonment &c.

The town and fort of Cannanore, are situated at the distance of a quarter of a mile from each other, the former at the bottom of a small bay, and the latter on a jutting portion of land, which forms one side of the bay. The town lies in N. latitude 11° 42′, and E. longitude 75° 27′ and is very populous containing many good houses, but

its streets are narrow and very filthy. The south-eastern aspect of the fort faces the sea; and the cantonment may not inaptly be compared in figure, to an irregular triangle, on the apex of which is placed the fort, the sides and base being occupied by garden houses, and buildings of various kinds. The Esplanade and European parade ground, which are of considerable extent, are contained in the area of the triangle. The European barracks are situated a few hundred yards west of the fort, and further on, in the same direction, is the European hospital, next to which is the medical depot, and then the mess house of H. M.'s. Regiment, the last public building in this direction of any note, being about a mile and a quarter distant from the fort. Between the buildings which have just been mentioned, and situated for the most part on a cliff rising from 40, to 60 feet above the level of the sea, are the garden houses of the officers of H. M.'s. Regiment. On the right hand,and in the north easterly direction are the church and burial ground, at the distance of about a quarter of a mile from the fort. In this direction also, and about a mile farther on, is the garrison hospital, between which and the church are scattered, without reference to order, numerous garden houses occupied by the European officers of the native regiments. Stretching between the garrison hospital, which may be called the extreme of the cantoment, in one direction, and the mess house of the Queen's regiment, the extreme in the other, is a line of officers' houses representing the base of the triangle, to which the cantonment has been likened. Immediately behind this line is the cantonment bazar, still further to the rear are placed the native barracks, hospital, and last of all the native lines.

Cannanore is surrounded by small hills and narrow valleys and is altogether free from any extensive reservoirs of stagnant water; cocoanut topes abound, and form one of the characteristic features of the place. They are seen between the officers' houses, surrounding the cantonment in every direction, and extending in the distance as far as the eye can reach; and the cantonment may be said to be imbedded in a forest of these

trees. There are a few rice fields within, and around the place, which are not considered prejudicial to health; as from the want of tanks, or other extensive reservoirs of water cultivation is confined to the monsoon season.

Soil. The soil is entirely composed of the debris of laterite, and is of a gravelly nature, forming a shallow covering to the rock itself. In few places is it more than one foot in depth, and in others, the bare rock appears. Though the laterite at some depth from the surface is soft like the clay of which bricks are made, it becomes hardened by exposure to the air, and is much used for building. The rock, near the sea shore, contains fossil shells imbedded in its substance.

From the porous nature of the soil, and sub-stratum of laterite, water is rapidly absorbed, and drained off; and in the course of a very short period after a heavy fall of rain, the surface becomes perfectly dry; there are therefore no accumulations of stagnant water to be met with.

Climate. The climate of Cannanore is mild, remarkably equable, and has been until lately very healthy.

The seasons may be conveniently divided into three viz. the cold, the hot, and the rainy or monsoon season. The cold season lasts from about the 1st of November, to the end of February; the hot from about the beginning of March, to the end of May; and the rainy, from the last mentioned period, to the beginning of November. The cold season can only be so called in a comparative sense, for it is rarely cold to the feelings, except perhaps for an hour or two in the very early part of the morning, during the occasional prevalence of a land-wind from the north-east, but the climate is never of a bracing character. This may easily be imagined from the fact, that the thermometer is seldom lower than 68°. The nights are dewy, and to the feelings of Europeans somewhat cool, the early part of the mornings occasionally foggy; and the days agreeably warm. Though the thermometer, during

the hot season, seldom indicates a greater degree of heat than 86°, still, at this time the climate is often very oppressive, particularly at night, when it is both close and hot; but a strong sea breeze moderates the heat during the day.

The approach of the rainy or monsoon season, which commences about the end of May, or beginning of June, and continues until the middle of October, is indicated by the appearance, in the south-west, of vast masses of clouds rising from the ocean, and advancing towards the north-east, accumulating and becoming more dense as they approach the land. The sky becomes darkened particularly towards night; the air from being calm and sultry, is agitated by violent gusts of wind; and vivid flashes of lightning, followed by loud peals of thunder, illuminate the heavens; amidst the commotion, rain at length commences to fall, and continues for several days in succession, after which the sky again clears and discovers the face of nature entirely changed; instead of parched fields, and withered grass, the whole surface of the country has become clothed in green. The air being cooled and purified by the rain, even animal life seems refreshed and invigorated. The rain continues to fall heavily during the months of June and July, with frequent intervals of from two or three hours, to a day or two; in August there is commonly a cessation for about twenty days; and again in September it falls heavily, and continues till about the 15th of October,after which it ceases nearly altogether; a violent thunder storm similar to that which ushered in the monsoon, usually preceding its departure.

During the intervals of rain, the air is often hot, close and moist, an atmosphere of steam seems to float around, and the respiration becomes as oppressed as in a vapour bath. Notwithstanding the violence of the monsoon, and the quantity of rain, there is, owing to the nature of the soil, as before described, but little interruption to the ordinary business of life, for in an hour or two after the heaviest rain, the public roads are passable for conveyances of all kinds; from this property of the soil, and the additional circumstance, that

there is rarely a day during the whole of the monsoon in which there is not an hour or two of fine weather, either in the morning or evening, the rainy season is not, as might be supposed, attended with much inconvenience or discomfort, indeed many prefer it to the other periods of the year.

Before quitting the subject of the rainy season, it may be remarked, that some preparations are necessary to encounter it with comfort; the majority of the houses on the Malabar coast being roofed with cadjan, which resists the rain better than tiles, require, before the setting in of the monsoon, to be newly thatched; or should the roofs be single tiled, these must be turned. Houses that are double tiled can alone be depended upon as water proof, and even these must be carefully looked to; conveyances, such as carriages, palanquins &c. must likewise be protected by cadjan covers from the rain, which would otherwise penetrate into them. All articles of clothing, not in constant use, must be carefully packed away to prevent their being destroyed, either by the dampness of the air, or by moths and other destructive insects, which abound at this season; on the occurrence of a day or two of fair weather, they should be exposed to the sun and repacked, especially all wollen articles, otherwise they would inevitably be destroyed by moths, notwithstanding their exclusion from the air. Silks, especially those of English manufacture, must receive more than ordinary care, as it is difficult, under the best management, to prevent their spotting. Even certain articles of food require attention; tea must be kept in well corked bottles, and sugar candy, in as dry a situation as possible, or it would be liable to be converted into syrup, articles of grocery, confectionary, and oilman stores, are peculiarly liable to destruction; in short there are few things of domestic use, that do not require the most vigilant care, to ensure their preservation.

Temperature and Thermometric range.

With respect to atmospheric moisture, as no hygrometrical observations have been made, a few of its general effects, may here be noticed. During the cold and hot seasons, Cannanore is not particularly damp,

but in the monsoon, as already mentioned, steel becomes rusted and even deeply corroded in an inconceivably short time ; glued articles of furniture are apt to fall to pieces ; and all such perishable articles, as imbibe moisture readily, are quickly destroyed, unless the greatest precautions are taken ; wollen cloths first become saturated with water, and if neglected, speedily rot ; paper, even with the greatest attention to its preservation, becomes damp and nearly useless ; books are deprived of their bindings, hats of their fur, and varnished articles of their polish ; any thing indeed susceptible of injury from moisture, is with difficulty preserved. Light fogs prevail during the rainy season, and for some short time after, and as the monsoon clears away, heavy dews succeed at night.

Annexed is a register of the thermometer in the shade, for the years 1836 and 1837, in which is shown the maximum, medium, and minimum range of every month. It will be seen on reference thereto, that the highest is 88°, and the lowest 67°, and that the medium temperature of the year is about 78°. It will also be seen, that the greatest monthly range 15°, occurs in the hot months, and that the lowest 6°. is in the monsoon season. The medium monthly range throughout the year being about 10½°, and the annual range, about 21°

Pluviometer. The annual fall of rain is estimated at about 120 inches ; but for the years 1835, 1836 and 1837, it averaged 124. The greatest quantity of rain registered in any one day was 6 inches.

State of the Pluviometer for the years 1835, 1836 *and* 1837.

	1835.	1836.	1837.
	Inches.	Inches.	Inches.
January........	0	0	0
February.......	0	0	0
March..........	4-8th	0	0
April..........	4	0	0
May............	7 4-8th	5 $\frac{7}{8}$	11 2-8th
June...........	62 $\frac{1}{8}$	45 $\frac{1}{8}$	30 4-8th
July...........	18 2-8th	22 2-8th	29 6-8th
August.........	14 $\frac{7}{8}$	19 6-8th	11 6-8th
September......	9 6-8th	16 2-8th	10 2-8th
October........	14 $\frac{1}{8}$	8	10 4-8th
November......	0	6 $\frac{1}{8}$	11 $\frac{5}{8}$
December......	0	0	0
Total....	131 $\frac{1}{8}$	123 $\frac{3}{8}$	118 $\frac{5}{8}$

Vegetable produce.

Besides cocoanut trees, which as already stated, are found in great number, various others are to be met with, such as the artocarpus integrifolia, or jack tree; the areeka catechu, or betel nut; the anacardium occidentale, or cachew nut; the mangifera indica, or mango; the musa-paradisiaca, or plantain, also flourishes here. Of creeping plants, there is a great variety, but the two most remarkable, and most cultivated, are the piper nigrum, or pepper vine, and the piper betel, or betel leaf plant. These may be seen encircling the jack and other trees, pepper being cultivated in sufficient quantity it is believed, for local consumption. Rice as already stated, is grown to a limited extent in the immediate neighbourhood of the cantonment, two crops being usually obtained in the monsoon. Besides the plantain and mango, pine apples abound, and attain a large size; they are easily reared and arrive at as high perfection, as in any other part of India. The hibiscus esculentus, or bandakai; the solanum melongena, or brinjal; the cucurbita hispida, or pumpkin; the cucumis sativus, or cucumber; the dioscorea sativa, or yam; the raphanus sativus, or radish; the trichosanthus anguina, or snake gourd; the convolvulus batatas, or sweet potatoe; the caladium esculentum, a much prized root, resembling the yam; together with the momordica charantia a vegetable much used by the natives, both in curry and fried, with a few others, are abundant. The herbage in the rainy season is

luxuriant but rank and coarse, and in a month after the heaviest monsoon it becomes dried up, assuming a russet brown appearance, as though no rain had fallen for months previously.

Exports and Imports. The following were the principal articles of export, and import, in the official year from April 1837 to April 38.

Exports.—Pepper, coir, rice, green gram, red betel nut, salt, cotton piece goods, shark's fins, poonspars, cotton, cocoanuts, deers horns, sugar, kopra or dried cocoanuts, sandal wood oil and white betel nut.

Imports.—Cotton, salt, coir, rice and paddy; wine and spirituous liquors, beer, wheat, copper, silk, soft sugar, spelter zinc woollens, millinery, dates, iron, tea, stationery, cotton thread, godawk, jaggery, perfumery, kopra, cocoanuts, cocoanut oil, moong, cuttary, tamarind, oil-man's stores, sugar candy, salt petre, camphor, coriander seed, saddlery, gun powder, onions, soap, dry dates and *kismisses.

The total value of imports for the year 1837, 38 amounted to 4,67,164 Rupees, and of exports to 3,12,050.

Population. The inhabitants of Cannanore are chiefly composed of *nairs*, *moplays*, and *teers*, but as no census has ever been taken, the relative proportion of these classes is not known; there is however reason to believe, that the moplays are the most numerous, and the teers the next. The moplays are traders, and comprise the moneyed part of the community; the teers who are the cultivators of the soil, are generally speaking poor; and the nairs, who may be said to form the aristocracy of the place, are an extravagant and dissipated race, and advantage has been taken by the moplays of their ruinous habits, to wrest from them nearly all their lands. The moplays have thus of late years, become the great landed proprietors.

The nairs are said to be a brave people, and of a high and

* Dried Currants from the Persian gulph.

independent spirit, compared with the moplays and teers, though when acting in concert, the latter are capable of acts of daring. As a body the inhabitants are a stout muscular race, and their appearance speaks favorably as to the salubrity of the climate; they are a lively people, and fond of active out door sports. The nairs and teers, are much addicted to the use of intoxicating liquors. The law of inheritance among the nairs is peculiar; married nair women being permitted to have free intercourse with any of the other sex, who are of equal, or higher rank; no nair therefore knows his father, in consequence of which, to ensure his own blood inheriting his property, the sister's children are the legal heirs. This law, or custom as well as several others, have been adopted pretty generally by the moplays, who came originally from Arabia. There is also a peculiar custom among the teers deserving of notice; which is, that their women appear in public, with the breasts uncovered; various reasons are assigned for this custom, but it is difficult to assign the true one, at the present day none but women of easy virtue among them cover their breasts.

The remaining portion of the inhabitants of the place, which are few in number, consist of *roman catholics*, *parsees*, and *hindoos*

Diet. Rice is the staple article of food with all classes of the natives; the poor however, are often obliged to content themselves with raggy and fish, on account of their cheapness; the latter being frequently neither of the best, nor of the most wholesome description; cocoanut oil being used by them, as a substitute for the more expensive article of ghee, the poor also eat cocoanuts scraped and boiled with rice, and consume large quantities of the fruit of the jack tree. With respect to animal food, beef is both good and cheap, and is freely used by the moplays; but mutton is of an inferior quality, and so expensive as to be out of the reach of the natives generally, as an article of food. Poultry is abundant and cheap. The high price of mutton together with its indif-

ferent quality, is usually a cause of complaint amongst the native troops, on their arrival at Cannanore from inland stations; this is occasioned by the distance from which sheep are brought, and the great mortality to which they are liable, from the rank quality, and scantiness of the herbage at different seasons of the year.

Prevailing diseases

The most prevalent diseases among the natives are fever, diarrhœa, rheumatism and cutaneous eruptions. Fever of the intermittent type, and almost exclusively of the quotidian form, prevails throughout the whole year; it would seem to owe its origin not so much to any local causes, as to the effect of malaria conveyed from the western ghauts by a strong, chilly east wind, which blows from an early hour in the morning, until near midday during the whole of the cold season. In the other seasons of the year fever is less frequent, and arises from the ordinary exciting causes. Generally speaking, intermittents are mild, often consisting of but two or three paroxysms, and seldom exceeding five or six; they are readily subdued by the administration of an emetic, followed by purgatives, except in the hot season when they are liable to be associated with biliary derangement; in such cases a repetition of the emetic, followed by mercurial alteratives, becomes requisite; bark in any form is seldom necessary. Cases of remittent fever are frequently admitted into hospital, though they rarely originate at the station. In almost every instance it is met with in individuals who had recently passed through the Wynaad jungle; in Europeans it assumes a severe, and at times a dangerous character, and requires at first the free use of the lancet; but in natives bleeding may generally be dispensed with. In both Europeans and natives however, active purgatives are indispensable, with the free administration of the sulphate of quinine, on a remission of the symptoms taking place; under this mode of treatment, remittents have hitherto proved very manageable. The quinine either diminishes the violence of the succeeding exacerbation, or

Fevers.

Treatment.

Remittents not endemic.

Effects of the quinine.

causes the disease to assume the intermittent type, after which the patient may be considered out of danger.

Diarrhœa though frequent amongst the natives, is not of a severe character, it is chiefly caused by the use of improper food, such as eating large quantities of cocoanut, jack fruit, bad fish, and other irritating and indigestible articles. A few doses of calomel and rhubarb are generally sufficient for its cure. Cutaneous eruptions are very prevalent, and scabies is thought by some to be more common, and more difficult of cure, than in most other parts of India; this however is not found to be the case on inquiry, but an eruption, ecthyma cachecticum, often mistaken for scabies is very difficult to cure, it is attributed by the natives generally to living almost exclusively on fish.

Cutaneous disease.

This disease is occasionally attended with anasarca of the lower extremities, and is liable to be mistaken for scabies purulenta, from which affection however the absence of itching should distinguish it. The attempt to cure it by sulphur has been observed in some instances to occasion general anasarca, followed sometimes by inflammation of the lungs. *Herpes* (particularly *herpes circinatus*) *lepra*, *elephantiasis communis*, together with *elephantiasis Græcorum*, are also prevalent diseases on the malabar coast, and the three last may be said to be incurable.

Small pox and measles annually.

With respect to epidemic diseases, small pox and measles make their appearance almost every year, but they rarely prevail with much violence. Until the year 1838, cholera did not occur in an epidemic form at Cannanore for several years, it broke out however about the middle of June in that year, having previously appeared at Quilon, Calicut, Tellicherry and Mahé. It for the most part attacked the poor, amongst whom it was very fatal; and was most prevalent in the town and cantonment bazaar, in both of which situations there is a great want of cleanliness; whilst in the sepoys lines, which are on open ground, and kept remarkably clean, scarcely a single case of the disease occurred.

Cholera.

The average quantity of rain fell in the months of June and July in that year, but it was remarked that longer intervals than usual of dry weather, occurred between the showers.

Hepatitis and Dysentery.

Hepatitis and Dysentery are not prevalent diseases except among the European soldiery, in whom they are not wholly referrible to climate.

Effects of Climate.

The climate of the malabar coast, which is very relaxing, is unfavourable to convalescence from acute disease, and patients but slowly and imperfectly regain their wonted health, and strength. To Europeans accustomed to a cold and bracing climate, a lengthened residence on the Malabar coast, has a relaxing effect, especially as the cold season of the year, is felt by them to be so, in little more than name; it might also be supposed that owing to the exceeding dampness of the monsoon season, the climate would prove injurious to those subject to pulmonary affections, but as the very equable temperature throughout the rainy season, counteracts much of the deleterious effects, that dampness might otherwise give rise to, the reverse of this is found to be the case; even common colds are less prevalent and milder, than in most other parts of India.

The military force stationed here consists of one European, and two native regiments, with one company of native foot artillery, and the usual number of camp followers.

Barracks.

The barracks of the European regiment occupy an elevated and open site, upon a plain, within about 500 yards of the beach, and 30 feet above the level of the sea; they are built of laterite and tiled, the ground on which they stand is a red porous soil.

The building which is of a quadrangular form, having four different entrances, consists of eight apartments, four of these being 216, and four 168 feet, in length, the breadth and height being, 20 and 18 feet, respectively. There are two lateral

court yards and a central one, within the area. The serjeants quarters, regimental school and canteen, are distinct buildings, in the side courts.

The principal rooms of the barracks have verandahs on both sides, six feet broad and seven high, the whole affording ample accommodation for a regiment of the average strength. The doors and windows are placed opposite to each other, but in consequence of being furnished with wooden shutters, instead of venetians, the ventilation has been complained of as defective.

Water.

There is an abundant supply of water of good quality on the premises, and the soldiers perform their ablutions in earthen vessels placed in the verandahs.

Hospital.

The hospital is situated at the distance of half a mile from the barracks, on an elevated piece of ground, 350 yards from a cliff, which overhangs the neighbouring low grounds, or valley. It is built of similar materials, but admits of being much better ventilated, from having windows which may be partially kept open, according to the state of the weather. The walls are lofty, and the principal part of the building has a double verandah all round, and the whole is surrounded by a high wall enclosing a spacious area for exercise. The accommodation in the chief building which is in the form of a cross ✝, and elevated three feet above the surface of the ground consists of one large and two small wards, the former 112, and the latter, 34 feet in length each; the breadth and height being 20, and 17 feet respectively. There is also another ward, in a detached building about 150 feet from that above described, which is 98 feet in length, by 20 in breadth, and 13 in height, having a narrow verandah on one side. Store rooms, cooking apartments, a dead house and necessaries, the latter communicating with the hospital by an enclosed passage, are likewise attached, but in separate buildings.

Garrison hospital.

The Garrison hospital at Cannanore consists of three distinct buildings, so arranged with respect to each other, as to leave a small quadrangular space of

ground in the centre. They are formed of mud and stone, have double tiled roofs, and are placed on an open elevated spot of ground, at the south-east extremity of the cantonment, sufficiently removed from other houses, and from the bazaars. One of the buildings, that allotted to the European sick, may be described as consisting of too long wards placed at right angles with each other. The second is similar in external appearance to one of the wards just alluded to, running in a parallel direction. The fourth side of the area is completed by a building facing directly south. Of the wards forming the part appropriated to the European sick, one is 61, and the other 41 feet in length, by 18½ in breadth, and the walls are 12 feet in height; the wards communicate with each other by an open arched way, and are well ventilated, having twelve large windows, with three doors between them, except on the northern face, and at the ends, which terminate in blank walls; these wards are surrounded by verandahs, two of which on the south, and that on the east side are enclosed, that on the west is open, and supported on large brick pillars; the depth of the enclosed verandahs is about 7 feet, and of the open one to the west 12 feet; the wards are thus well protected from the south west monsoon. The second building is divided into three unequal apartments, the largest of which, formerly used as a bath room, has recently been occupied by sick convicts, next to this is an apartment 18½ feet in length, by 15 feet in breadth, which is at present a store room; the third apartment 26 feet in length by 15 in breadth, forms the surgery, where the medicines are also kept. The third building being the front of the garrison hospital, is appropriated for the reception of the native sick; it is 37 feet in length, by 26 feet in breadth, and surrounded on the three outer sides, by an enclosed verandah 10 feet 9 inches wide. Two rooms are taken off the verandah, in one of which the assistant apothecary resides; the walls of the hospital are 14½ feet in height, and it is well ventilated by means of doors and windows; and the outer walls of all the enclosed verandahs have large windows, furnished with wooden shutters.

There are two cookrooms, and two necessaries attached to the garrison hospital; the cookrooms adjoin each other, and are placed in the rear of the ward occupied by sick convicts; one being for the use of the European, and the other for the native sick.

The necessary for the European sick, is immediately in the rear of the European wards, and that for the natives at the distance of about 50 yards from the hospital. A supply of good water on the spot is much required, none being at present procurable except from a distance; the floors of the hospital which are of mud, should also for the sake of cleanliness, be chunamed.

Hospitals for Native Corps.

The hospitals for the native corps are built on an uniform plan, they are of brick and mortar, and furnished with a sloping double tiled roof, each consisting of one ward 98 feet in length, by 18 in breadth, and 10 feet high, they have an open verandah $7\frac{1}{2}$ feet wide on the northern face, but none on the other sides; two small rooms are enclosed off the verandahs, one at either extremity, and serve as a store room, and surgery; the hospitals are furnished with doors, but no windows; in the rear of each, at a distance of about 30 yards, there is a small cookroom, and a necessary.

Meteorological Observations for the year 1836, *shewing the prevailing winds, &c. for each month.*

Months.	Thermometer in the Shade. Maximum	Medium.	Minimum	Winds.	REMARKS.
January........	81	75	68	N. E.	Land winds occasionally strong, succeeded by sea breezes in the afternoon—no dews.
February.......	84	78	69	N. E.	Weather in general clear, without dews, the regular land winds aud sea breezes prevailed.
March..........	88	81	73	N. E. and S. W.	Weather dry, alternate sea and land breezes prevailed.
April.	88	85	78	N. N. W. and S. W.	Morning calm, afternoon strong breezes from the N. W. and S. W. sultry and oppressive, heavy showers of rain, on the nights of the 25th and 26th.
May............	88	84	76	N. E. S. W. and N. W.	Dry till the 15th, when heavy rain, fell again from the 15th to 29th, except some partial shower.
June...........	84	78	73	W. and S. W.	45⅛ inches rain fell—wind stroug from the westward and south west.
July............	84	77	73	W. N. W. and S. W.	Winds west N. W. and S. W. strong gales with heavy rain the first half of the month, and mild open weather the latter half—22¼ iuches of rain fell.
August.........	79	76	73	Westerly.	The break of the monsoou commenced in July, and continued until the middle of the month, since which the rain has fallen abundantly, with occasional high winds from the west,
September......	81	79	75	N. E.	Heavy rain and wind in the beginning of the month, as it advanced, the weather became clearer, and on conclusion open and dry—land winds occasionally blowing.
October........	84	80	73	S.	Alternate land aud sea breezes, the former from the southward; weather clear in the beginning of the month, cloudy towards the latter end, threatening rain.
November......	84	78	73	S. E.	Some refreshing showers in the beginuing of the month, the remainder dry and sultry, land wind oppressive by day, cool in the mornings and evenings—dews.
December......	83	78	73	E. by W.	Winds from the eastward in the mornings and westerly in the after-noon—no dews or rain.

Meteorological Observations for the year 1837, *shewing the prevailing winds, &c. for each month.*

Months.	Thermometer in the Shade. Maximum	Medium.	Minimum	Winds.	WEATHER.
January........	84	82	71	N. E.	Alternate land and sea winds prevailed, the former beyond their ordinary extent, slight dews in the evenings and mornings.
February.......	84	80	72	S. E.	Land and sea breezes pretty regular, the former less severe and the latter much from the southward, dews very slight.
March..........	88	84	77	S. W.	Land wind ceased, nights very close, strong sea breezes.
April...........	88	85	79	N. E. & S. W.	Weather extremely sultry, strong and steady sea breezes during the day, nights clear.
May.............	88	82	75	N. E. & S. W.	Weather at the commencement of the month very sultry, frequent showers until the 25th, when the monsoon regularly set in—11⅜ inches rain fell.
June............	88	78	75	N. W. & S. W.	Weather various and showery, 30½ inches of rain fell.
July............	80	77	75	N. E. & S. W.	Monsoon favorable, and average fall of rain, winds moderate.
August..........	78	76	74	S. W.	Partial showers of rain, temperate, cool and agreeable.
September.......	88	81	75	N. E. & S. W.	Weather serene, nights rather close, 10½ inches of rain fell during the month.
October.........	83	79	75	W.S.W.S. W & N. E.	The beginning of the month was characterized by very heavy falls of rain, in the middle and termination, it proved very dry.
November.......	85	80	74	N.E.N.N.E. & S. W.	The beginning of the month rainy, and highly tempestuous, at the close of the S. W. monsoon, towards the end of the month land winds prevailed.
December......	82	78	67	N.E.W.S.W. &S. W.	Land wind rendered the mornings during the month very cool, the days in general excessively hot.

Tables of diseases amongst the troops stationed at Cannanore, both European and native, with some remarks, are given at the end of the report of this division; but before concluding these observations, it may be necessary to notice those amongst the prisoners in the jail.

Jail. Convicts only are kept at Cannanore, and they are confined in one of the casements of the fort, measuring 163 feet by 27, which consists of two arched apartments, eleven feet high, parallel to each other and divided by a central wall; they communicate freely with each other by large openings, and they are both well ventilated. The extent of accommodation, diet, labour &c. are shewn in the general statement appended, as in the preceding divisions. The sick are accommodated in one of the wards of the garrison hospital.

The following table shews the nature, and amount of disease and mortality, which have occurred amongst the prisoners, from 1831 to 1841 inclusive.

The average annual numerical strength has been only 46, and the admissions 65, or nearly 139 per cent.; the number of deaths annually has averaged 3, or nearly 4½ per cent. on the strength.

The most numerous admissions have been from *bowel complaints, fevers, thoracic diseases and rheumatism*; and the mortality has chiefly resulted from *bowel complaints and fevers,* nearly one half of the total number of deaths having been occasioned by *diarrhœa and dysentery.* The principal cause of these acute diseases, mentioned by the medical officers, has been exposure to the sudden heavy falls of rain, during the south-west monsoon.

JAIL OF CANNANORE.

o. 1.—*Table exhibiting the number of Admissions and Deaths, of the Convicted Prisoners, from each class of disease, for 10 years.*

CLASSES.	DISEASES.	From 1831 to 1841 exclusive of second half of 1838 and 1839*. Aggregate strength 469. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions & Deaths from each class of Disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
* During which period no isoners were located in this il.													
evers......	Febris ephemera	25	0	25	0	44	2	38	3	82	5	17 ·483	6 ·097
	,, intermit quot	18	1	12	3								
	,, remittens....	1	1	1	0								
	,, com. cont....	0	0	0	0								
	Cholera........	0	0	5	2	0	0	5	2	5	2	1 ·066	40 ·000
iseases of the Abdominal viscera......	Diarrhœa......	16	3	11	4	86	5	64	8	150	13	31 ·982	8 ·666
	Dysenteria acuta et chronica.	8	2	8	4								
	Obstipatio......	17	0	22	0								
	Dyspepsia......	42	0	22	0								
	Hœmorrhois....	3	0	1	0								
	Hepatitis	0	0	0	0								
iseases of the Lungs	Catarrhus......	20	2	18	0	22	2	18	0	40	2	8 ·528	5 ·000
	Pneumonia.....	2	0	0	0								
uptive Fevers......	Variola.........	2	2	0	0	5	2	13	0	18	2	3 ·838	11 ·111
	Varicella..	3	0	13	0								
opsies....	Anasarca.......	2	0	2	0	0	0	5	0	5	0	1 ·066	0 ·000
	Ascitis......	0	0	3	0								
heumatic affections.	Rheumat. acutus et chronicus	31	0	43	0	31	0	43	0	74	0	15 ·778	0 ·000
enereal affections ..	Syphilis primitiva..........	1	0	0	0	4	0	2	0	6	0	1 ·279	0 ·000
	,, consecutiva	0	0	0	0								
	Gonorrhœa.....	1	0	0	0								
	Hernia humor :.	2	0	1	0								
	Strictura urethræ..........	0	0	1	0								
	Atrophia...... ..	0	0	3	2	0	0	3	2	3	2	0 ·639	66 ·666
iseases of the Skin..	Morbi Cutis....	9	0	2	0	9	0	2	0	11	0	2 ·345	0 ·000
o. ,, Eye.	,, Oculorum...	6	0	8	0	6	0	8	0	14	0	2 ·985	0 ·000
	Other diseases....	112	2	131	1	112	2	131	1	*243	3	51 ·812	1 ·234
	Total..	319	13	332	16	319	13	332	16	651	29	138 ·806	4· 454

NOTE.—Per centage of deaths to strength, 6·119.

* Of this number 118 were cases of ulcus.

TELLICHERRY.

Situation and general description.

Tellicherry, situated in North latitude 11° 44′, and East longitude 75° 31′, is a small station in the province of Malabar, 15 miles south of Cannanore, with the western ghauts to the east, and the ocean forming its boundaries on the west.

It was formerly a place of some consequence, was defended by a fort garrisoned by European troops, and withstood several attacks made upon it by Hyder Ally, whose attempts were thoroughly defeated by a vigorous sally, conducted by Major Abington in 1782.

The situation of Tellicherry is admitted to be very beautiful, being backed by wooded hills, interspersed with valleys, and watered by a fine river. Its healthiness is however its chief recommendation, though delicate Europeans suffer from the dampness of the climate. This station like others on the coast, is under the influence of the south west monsoon. The average fall of rain is from 120, to 140 inches.

Natural break-water.

The existence of a natural break-water at Tellicherry, formed by a reef of rocks extending about 472 yards in length, and running parallel with the shore, at the distance of about 614 yards, deserves notice, there being sufficient depth of water within it, for a ship of 5 or 600 tons to ride at anchor. As the wind and current prevail very much from the north west, during what is called the south west monsoon, the water is not so smooth upon the beach immediately opposite these rocks, as it is a little to the south of them; and it has been suggested that they would form an excellent depôt for coals for steamers, but an accurate survey of this part of the coast is still much required.

Produce.

A soil so abundantly watered, cannot be otherwise than very productive, yielding in some places three, and in many two crops of rice annually. Pepper forms one of the

principal articles of commerce, it requires little labour in its culture, but gives employment in gathering it, to a large proportion of the inhabitants. The cocoanut tree is the next article of general utility, and profit to the people; it grows in abundance along the whole coast, and the uses it is applied to, are very various, of the tree itself small boats are occasionally made, and also frames for houses,rafters, &c ; the leaves are used for thatching, making mats, and baskets; the nut affords food, oil, and charcoal; and large quantities of coir rope, are made from the outer rind; lastly though not of slight estimation among the natives, toddy is obtained from the tree by incision. Fish oil is likewise an article of considerable commerce.

Inland, great varieties of wood are found, from the teak to the bamboo. The areca catechu, is also very abundant, as likewise the piper betel; ginger and arrow root are indigenous, and a considerable quantity of the latter, is prepared at this place for the English market.

At a short distance from Tellicherry there are some plantations the property of a gentleman, who has very successfully cultivated the cinnamon, and coffee plants.

The other exports consist of cardamoms, sandal wood and cloth, the produce of the eastern part of the district.

The markets are tolerably well supplied with fish, which with rice cooked in various forms, and vegetables, constitute the principal articles of diet.

The population amounts to about 20,000; of whom moplays form the largest proportion, nairs, tiers, and mackwas comprising the remainder.

Dwellings. The houses are for the most part built of unbaked bricks and thatched; among the more opulent natives however, laterite which is obtained in many parts of the district, is employed in building.

The only furniture used in native dwellings, is a charpoy or cot, with a few cooking utensils.

Habits. The male part of the population incur but little expense in their attire, and females are also but slightly clad, and exposure of the breasts is considered a mark of chastity. They practice ablution, and afterwards anoint the body with oil, and are generally a healthy and robust race of people tolerably free from disease, cutaneous eruptions being the most common of their complaints. As they are permitted to carry knives about their persons, they frequently wound each other in drunken brawls.

Diseases. Slight fever prevails during the changes of the seasons, but readily yields to simple remedies. Small pox occasionally rages with much violence, notwithstanding a vaccine establishment is kept up. Cholera carried off vast numbers in the months of May, June and July of 1838, and in such visitations the natives, (particularly moplas), ascribe little or no efficacy to medicine.

Police &c. The police duties are conducted by a Sudr Ameen under the general superintendence of the magistrate of the district. An auxiliary court, and likewise the provincial court of the division are held at this station; the former is abundantly occupied with civil suits, the inhabitants being exceedingly litigious. The citadel or fort in which are situated Jail. the jail and hospital, is built on a rising ground close to the sea, and about forty feet above its level. It is of an oblong shape being 117 yards in length and 34 in breadth; its length runs parallel to the sea shore. The whole of the north west side of the citadel is occupied by a lofty building, the upper part of which is appropriated to the criminal court and offices, and the lower part forms the jail, in which the prisoners are confined. The rooms are spacious, airy, from 11 to 12 feet in height, clean and well secured; the prisoners are classed in the various apartments according to the nature of their crimes; the whole is calculated to contain about 300 persons. See table at the end of the report, for diet, clothing, &c.

The hospital, a tiled building, occupies the southern angle of the citadel, and faces north east, with a verandah in front;

it consists of three wards and a dispensary, and can accommodate forty patients. It is well ventilated, and the walls are lofty. Cooking rooms and apartments for commissariat supplies are attached, and also two necessaries which are so constructed as to project over the eastern angle of the fort; the ordure falls into a drain, which during the dry season is cleansed daily by the prisoners, and in the monsoon the rush of water keeps it clean.

The military hospital is a small building on the opposite side of the fort, and is capable of accommodating from ten to fifteen men; from the little sickness in the detachment of sepoys doing duty here (about 100 men) it has been found amply sufficient.

The following table exhibits the nature and amount of disease and mortality, which have occurred amongst the convicted prisoners during a period of 12 years, from 1829 to 1840 inclusive. The prisoners waiting for trial have been so few in number, that it has not been thought necessary to give the usual table of sickness amongst them.

The annual numerical strength has been somewhat under 100, and the admissions into hospital, have averaged nearly 180 per cent, 90 of whom however were from trifling complaints, as ulcers and cutaneous diseases. The deaths have averaged three annually, or 1·840 per cent on the sick treated. The most numerous admissions have been from *fevers, bowel complaints, eruptive fevers and rheumatism;* and the greatest mortality has resulted from *bowel complaints, cholera and fevers.*

In 1832 and 1838, cholera occurred in an epidemic form at this station, but in both years very few prisoners were affected; in 1832, thirteen cases with five deaths took place, and in 1838, only one man was admitted, and he died.

This jail has always been considered to be particularly healthy, and which is ascribed to its locality, its being well ventilated, and to the ample room afforded to the inmates; for

with regard to diet, clothing, labour and exposure out of doors, all prisoners, as mentioned in the previous report, are placed in nearly equal circumstances.

JAIL OF TELLICHERRY.

No. 2.—*Table exhibiting the number of Admissions and deaths of the Convicted Prisoners, from each class of disease for 12 years.*

CLASSES.	DISEASES.	From 1829 to 1840 inclusive. Aggregate strength 1191. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions & deaths from each class of disease. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
Fevers......	Febris ephemera	153	0	202	2	241	2	253	5	494	7	41 ·477	1 ·417
	,, intermit quot.	86	0	49	1								
	,, remittens....	1	1	0	0								
	,, com: cont...	1	1	2	2								
	Cholera.........	3	1	16	8	3	1	16	8	19	9	1 ·595	47 ·36[illegible]
Diseases of the Abdominal viscera......	Diarrhœa.......	44	2	37	3	92	4	95	6	187	10	15 ·701	5 ·347
	Dysenteria acuta et chronica.	4	1	8	1								
	Obstipatio......	34	0	38	1								
	Dyspepsia......	9	1	10	0								
	Hœmorrhois....	1	0	1	0								
	Hepatitis......	0	0	1	1								
Diseases of the Lungs.	Catarrhus......	5	0	1	0	8	0	3	0	11	0	0 ·923	0 ·000
	Asthma.........	3	0	2	0								
	Phthisis pulmonalis.........	0	0	0	0								
Do. of the Brain.....	Apoplexia......	1	1	1	1	2	1	2	2	4	3	0 ·335	75 ·000
	Mania..........	1	0	1	1								
EruptiveFevers......	Variola.........	14	5	3	1	80	5	80	1	160	6	13 ·434	3 ·750
	Varicella.......	63	0	77	0								
	Rubeola........	3	0	0	0								
	Erysipelas......	0	0	0	0								
Dropsies....	Anasarca.......	4	0	5	1	4	0	6	1	10	1	0 ·839	10 ·000
	Ascitis.........	0	0	1	0								
Rheumatic affections.	Rheumat. acutus et chronicus.	46	0	48	0	46	0	48	0	91	0	7 ·892	0 ·000
Venereal affections ..	Syphilis primitiva..........	7	0	17	0	8	0	20	0	28	0	2 ·350	0 ·000
	,, consecutiva..	0	0	0	0								
	Gonorrhœa.....	1	0	3	0								
Specific diseases.....	Lepra..........	0	0	0	0	0	0	0	0	0	0	0 ·000	0 ·000
	Scorbutus......	0	0	0	0								
	Scrophula......	0	0	0	0								
	Dracunculus....	0	0	0	0								
Diseases of the Eye..	Morbi Oculorum..........	19	0	21	0	19	0	24	0	43	0	3 ·610	0 ·000
Do. ,, Skin.	,, Cutis......	23	0	37	0	23	0	37	0	60	0	5 ·037	0 ·000
	Other diseases..	500	1	509	2	500	1	509	2	*1009	†3	84 ·718	0 ·297
	Total..	1026	14	1093	25	1026	14	1093	25	2119	39	177 ·917	1 ·840

NOTE.—Per centage of deaths to strength, 3·274.
* Of this number 661 were cases of ulcus.
† Two deaths under the head ulcus, and one under the head wounds and accidents.

DISTRICT OF CALICUT.

Boundaries, situation, extent. This district is bounded on the north and north east, by the Coorumbanaad talook and the Yellatoor river; on the east by the ghauts, and the high range of Wanootumally; on the S. E., by the Punvymallay range, and the Coliatoor river; on the south, by the Beypore river; and on the west by the sea; its whole perimeter being 109 miles, containing a superficial area of 261 square miles;—about 40 of which are estimated as being under wet cultivation, 20 are occupied by villages and topes, and 100 consist of low hills, some of which are bare of wood, and others covered with jungle, the remaining parts of the country to the east, being forests and mountain land; the higher grounds are usually laid out in terraces for the cultivation of dry grains, and the valleys for rice.—In figure its shape is very irregular, being in length about 28 miles, while it varies in breadth, from two and a half miles about its centre, to seven or eight at each extremity.

Population. *Nairs, Numboories Maplays,* and *Teers* predominate in the district, comprising about two thirds of the population, which amounts at present to a total of 78,593; the town of Calicut itself having a population of about 20,000. The Portuguese inhabitants are reckoned at 523; and the proportion of Hindoos to Musselmauns, is estimated at 30 of the former, to 100 of the latter.

Villages. The district is divided into 12 *hobillies,* these being again subdivided into 12 *unshoons;* and it contains 128 villages.

Town of Calicut. The town of Calicut, lies to the south of Cannanore, being in N. Latitude 11° 15,′ and E. Longitude 75° 50′; it is but little raised above the level of the sea,

and is of considerable extent from the houses being much scattered, and its being divided into several small estates ; it consists of one extensive street, about three fourths of a mile in length, with small cross streets leading from it. To the south, extending to the river, is a dense population of maplays, in which quarter of the town there are numerous mosques; to the N. W., lies the Portuguese part of town, composed of a number of streets, with respectably built houses, in its vicinity is a roman catholic church, and a large tank ; facing the sea is the custom house, with the dwellings of the European gentry; towards the east part of the town there is a beautiful tank of fresh water about 200 yards square, built of granite, and is the principal drinking water used by the inhabitants both European and native; on the N. W. is the Collector's cutcherry, near to which is a small parade ground for the detachment of native infantry, and also the sepoys lines, which are open to the sea breeze.

The jail is situated in the Portuguese town, to the north of which is the English burial ground.

The houses within the town are built chiefly of laterite, some being tiled, whilst others are thatched with cocoanut leaves ; the namboories and nairs live in gardens in its vicinity, which are usually enclosed with a mud bank and ditch, their houses being very generally built under the shade of trees.

The higher classes of the people are cleanly in their persons, but the slaves and lower castes, are extremely negligent in this respect, and are much subject to cutaneous diseases.

Beypore. The town of Beypore lies about six miles south of Calicut, on the right bank of the river of that name, and is one of the principal depôts for teak timber.

Roads. There are several good roads, which afford safe and easy communication for all kinds of land carriage ; and there being but little surf on this part of the coast, small craft

can traffic with facility. The ports and passes are however nearly all shut from 1st June, to the end of August, during the prevalence of south west monsoon.

Mountains. The country extending eastward to Padanutum, and the southern portion of the Palavoge sub-division is open, the hills in these parts having generally smooth sides, with ledges of rocks running along their crests; the most conspicuous of these is Poupauray, eight miles east of Calicut, which has a ledge of large rocks on the summit, impregnated with iron; farther to the eastward, the face of the country becomes covered with dense forest trees, which extend to the ghauts. The lofty range of mountains called Wanootumally, separating this district from Wynaad and Ernaad, contains large quantities of teak and other timber, and also bamboos, which are floated down the rivers to Calicut and Beypore during the rains.

The principal rivers are the Yellatoor, which rises in the mountains near Poonoor-desum, and discharges itself into the sea after running a devious course of 34 miles; another stream which has its principal source in the Wavool mountains, flows in the direction of Tiruvambuddy and Kutratoor, and joins the Beypore river east of Pavoor, after running a course of 23 miles, generally through forests; it is navigable for small boats from its confluence up to Annaykurin, where it is joined by a large mountain stream. A third river also rises in the ghauts, in the vicinity of Tambercherry, and passing by that place, joins the Beypore river 12 miles from the sea. Travellers proceeding to visit the Neilgherries from Calicut, by the Koondah pass, may proceed to Arriacode by water, (the distance being a few miles less than the road, viâ Manjerry-vandore,) from whence the top of the pass by the new road, is distant about 27 miles; but as yet the only bungalow on this line of road is one in bad repair, at the top of the pass. The banks of the rivers generally, are thickly wooded and precipitous inland, but have a gentle slope near the sea; some of them are infested with alligators, and the fish in general, with which they abound, are said to be wholesome.

Tanks and wells. There are no lakes in the district, but tanks and bowries are numerous, particularly in the town of Calicut, and well supplied with water; the cultivators however depend almost entirely upon the rains, for the water necessary for their crops.

Drains. The town of Calicut is well drained, the channels being built of stone; those proceeding from the jail are 3 feet deep, and 6 inches broad, being made thus narrow, to prevent the possibility of the prisoners escaping through them; they are all open at top, except where they pass through thoroughfares.

Climate. A general description of the climate of this coast has already been given in the report for Cannanore, from which that of Calicut does not materially differ. It may be mentioned however, that Calicut is considered a healthy station, for notwithstanding that much water lodges in the vicinity during the rains, the salubrity of the atmosphere does not, in consequence of the nature of the soil, appear to be affected thereby; in some situations however, noxious exhalations arise during the month of November, when the rain water is nearly all evaporated, and the sun begins to act on the decaying vegetable matter.

Salubrity of Calicut.

Soil. Near the sea, the soil consists of a light brown sand; on the hills in the interior, it is red and gravelly; in the cultivated valleys, it consists of a mixture of red and brown earth, and in wooded situations, it is a black mould.

Vegetable products. The productions are rice, dry grains and pulse, of various sorts, cocoanuts, areka or suppary nuts, sessamum, pepper, turmeric and arrow root.

Cotton. Cotton is but partially cultivated, the only talooks in which it is grown to any extent being Cavay, Cherikul and Kotiste, and the produce in these is very limited; the plant is never watered, and both its quality and quantity, depend upon seasonable rain. The hill cotton of this district

is considered to be of good quality, but no pains appear to be taken in the cultivation of it, although cotton land in Malabar, is exempted from land tax.

Turmeric. Turmeric is grown in small quantities by most of the inhabitants in the interior, wherever the soil is found to be sufficiently rich for the purpose; in the talooks of Shernaad, Ernaad, Calicut and Coorumbanaad, where it is largely cultivaed, it seems to flourish without being either manured or irrigated in a soil consisting of sand and red clay; the quantity of this article annually exported from Malabar, varies from 400, to 1,300 candies.

Sandalwood. Sandal-wood is only found in the neighbourhood of a village in the Neilgherry talook, called Davaraypatam, and in small quantity in Wynaad; it is of spontaneous growth, and has never been attempted to be planted, or brought under cultivation; in 1837, the number of full grown trees amounted to about 600, which might be calculated to yield 24 candies of wood, i. e. 640 lbs each candy.

Sappan-wood. Sappan-wood, which affords a red dye, is only planted in garden or other fences, the reason of this seems to be a prevailing opinion, that it exerts a baneful influence over other trees, or shrubs growing in its vicinity. It may be reared from seed in almost any soil, but evidently grows best on a gravelly bed mixed with the common reddish clay; the seeds are sown before the rains, aud the plants require to be watered during the dry season, till two or three years old; the trees are fit to be cut after 10 or 12 years, before which they are of little value; the wood is sold at from 8, to 15 rupees per candy.

Coffee. Coffee is not much cultivated, there being but two or three places where it is grown to any extent, though a few shrubs are to be found in most private gardens. It has been grown at Anjarikandy and Wynaad, (under the immediate superintendence of Europeans,) where it thrives well, though there does not appear to be any thing peculiar in the

character of the soil at these places. It requires a rich loam, and shade from the sun's direct rays, with careful digging around the young plants, and plentiful watering every other day, till they begin to bear, which they do in the third year; afterwards, less moisture is requisite, but the roots should be manured annually, to ensure good crops.

Cocoanuts. The average produce of Cocoanuts in the whole of Malabar, is estimated at from 3 to 400 millions annually, which are valued at half a million of rupees, but in addition to this, from 20 to 25,000 candies of *copra*, (or dried unshelled nuts) are exported, valued at rupees 4,00,000.

Pepper-vines. Few pepper vines are found in Calicut, but in the other parts of the province of Malabar, pepper yields a considerable revenue; the exportation of this article during the years 1833, 34, 35 and 36, amounted to 54,698 candies.

The rice lands undergo repeated ploughing from August till October, in order to make the soil light; the seed of the first sort of rice, is sown in March, and transplanted in the months of May and June, the crops being usually reaped between August and the end of October; the second sort is sown in June, and transplanted in July and August, the harvest months being December and January; a third sort called *poonjah*, which is generally cultivated in *parambas*, is sown in the month of May, and the harvest collected in July and August. Gingely seed is sown in the month of August, and the harvest gathered in December and January. Sugar cane is planted in February, and cut down in November and December. Thama corn is sown in May, and reaped in July and August. Sweet pumpkin, brinjal, bandakois, country beans and other vegetables, are to be had throughout the year in situations having a command of water. Arcka-nuts the produce of the arcka-palm are also produced throughout the year; ginger and turmeric, are cultivated in October and November, and pepper-vines yield their harvest in December and January.

Animals.

The domestic cattle of the country, such as bullocks, cows, buffaloes, goats and asses, are of inferior growth, sheep brought from the country on the other side of the ghauts, do not thrive here, and those bred in Malabar are but few. The sheep imported from Guzerat, Mocha and other places, which are usually stall fed, continue healthy and preserve their size, whilst unmixed with the country breed. Common fowls, geese, turkeys and ducks are abundant.

Mineral productions.

Iron ore is procured in several places, particularly in some low hills in the immediate neighbourhood of Calicut. Gold is found more or less in all the rivers of Malabar; those which yield it in the largest quantities are the Todakall river, the Artiparambar, a rivulet which joins the Todakall, and the Arnaykur river, but the Cureatode stream, which joins the Arnaykur river, yields the purest gold. In 1833 a committee was appointed by order of government, to report on the productiveness of the mines at Nellambore, a village situated on the Beypore river, about 30 miles in a direct line, and in an easterly direction, from Calicut, by whom the following opinion was recorded; that the productiveness of the mines was by no means such as to warrant the requisite outlay in working them, from the very doubtful prospect of profit, and independently of this, the unhealthiness of the climate in which the mines are situated, would make it uncertain whether any European possessed of sufficient knowledge to superintend the mining, could be induced for any salary, to remain in their neighbourhood throughout the year.

Roads and communications.

The high northern road runs in a parallel line with the sea, (from which it is distant about half a mile,) to the Yellatore ferry 7½ miles from Calicut; it is sandy, and lined with trees on both sides. The inland road, via Munjerry, strikes off to the left, one mile from Kulaya bridge, and proceeds in a south easterly direction to the ferry, it is also sandy and lined with trees; the road to the Tambercherry pass runs over a hilly country, to Pudanellum.

Diseases. The chief and perhaps only disease endemic in the district, is the Malabar ulcer, which is generally combined with Elephantiasis; it chiefly attacks the extremities, but sometimes the face, leaving the subjects of it dreadful objects; although it does not resemble cancer in appearance, yet in its effects and resistance of all remedial measures, it is not unlike that disease. The victims of it,—for it is generally in the end fatal—are of the poorest class of natives, who live on bad rice and fish, dwell in wretched huts, and in narrow filthy streets overflowed with rain during the monsoon.

Among the same class of people, as well as the prisoners in jail, anasarca, diarrhæa, and dysentery occur, on the approach of the monsoon, particularly the two former diseases, which in many cases prove fatal. Cholera has occasionally been epidemic, as in the latter part of 1833, the beginning of 1835, and again in 1838. Measles of a mild description appears, as in other places, generally during the cold season following the monsoon; and chicken pox is met with at all periods of the year.

Jail. The jail is an oblong square building, surrounded by a double wall, 12 feet high, the entrance to which is on the N. E.; at each corner of the square are placed watch towers, communicating with each other, by which the jail is completely overlooked; it has seven large and well ventilated wards, 12 feet in height, six of which are 43 feet by 21, and one 28 by 21, besides smaller apartments, and solitary cells; small walled courts 45 feet by 32, have been built within the square, to prevent the different classes of prisoners communicating with each other, in each of which is a well; a small stone basin has been constructed in the floor of each ward, to serve as urinals, for the convenience of the prisoners at night, which communicate with open drains in the inner courts. The men have access to the courts at all times during the day, but are locked up at night. The jail is capable of accommodating 600 prisoners.

Jail Hospital. The hospital, an upper storied building constructed of laterite, is situated 60 yards behind the jail, and 260 from the sea, it was formerly part of a Danish factory, and is enclosed by a high wall. A considerable space of ground between the two buildings, which are separated by a wall, is used as a work yard. There are four rooms on the ground floor, one of which is used as the dispensary, and two others are set apart for lunatics. The upper story is composed of three rooms, having boarded floors, the principal being 30 feet by 20, with one on either side, measuring 26, by 15 feet. The hospital is capable of accommodating 100 patients. The ground on which it is built is sandy, and its upper-story is freely exposed to the sea-breeze, but owing to the outer wall, the rooms below are confined.

Native Military Hospital. The hospital for the native detachment, is directly behind the wall surrounding the jail hospital; being well situated, open to the sea-breeze, and distant half a mile from the sepoys lines; it is a long thatched building, 52 feet in length, raised eighteen inches above the ground, and capable of accommodating 25 patients.

Statistics of crime in the province of Malabar. A considerable decrease in the number of crimes and misdemeanors, in the province of Malabar, occurred in 1835 and 36, as compared with 1834. Out of a population of 1,140,916 souls, contained in a superficial area of 6,262 square miles, the total number of crimes in 1834, amounted to 1,023; and in 1835, to only 714, being a decrease of 309; in 1836, the total number was 648, or 66 less than in the preceding year. The number of murders ascertained to have been committed in 1834, was fifty, whilst in 1835, there were only 44; but if four murders, on the Neilgherry hills be deducted, the number which actually occurred in Malabar is 40, or 10 less than in 1834. Of the murders committed in 1835, no less than thirteen were occasioned by the objectionable eastern custom, so prevalent throughout Malabar, of carrying knives; for this weapon being always at hand, it is often used on the slightest provocation. Murders are also frequently committed from jealousy, arising

from the illicit intercourse between the sexes, common amongst the Nairs; and which under the present deplorable state of the morals of these people, sanctioned by custom from time immemorial, it is difficult, if not impossible, to abolish.

Remarks on the following tables.

The annual numerical strength of the convicts has averaged during the eleven years 232, and the admissions into hospital have been 428, or 183·615 per cent; the number of deaths annually during the same period has been 28, or 12·090 per cent on the strength, the total admissions being 4708, the deaths 310, from an aggregate strength of 2564.

This average of sickness has been pretty uniform throughout the whole period, but occasionally it has been increased especially in the 2d half of the year 1836; when, in the months of November and December the state of the sea both at this station and at Tellicherry, was very unwholesome; it sent forth a strong stench of putrifying matter, and deposited a black mud on the sand. For many yards from the shore, the water was covered with dead fish, and on the beach, they were lying in large heaps; the effluvia arising from which extended over the station, and almost every person was more or less ailing,—fever, headach and nausea were the general complaints.

In 1833 and 1838, the mortality greatly exceeded the average above mentioned, the deaths amounting in these two years to 46 and 75 respectively; the increase in both years was occasioned by cholera; no less than 25 deaths took place in the second half of 1833, from 36 admissions, and 41 from 67, in the first half of 1838.

The most numerous admissions have been from *fevers, bowel complaints, and eruptive fevers*, and the greatest number of deaths have been produced by *bowel complaints, cholera, fever, and dropsies*; 5-6ths of the whole mortality having been caused by these diseases alone. The same diseases have also been most prevalent amongst the prisoners waiting for trial, and have occasioned 45 deaths, out of 51, nearly 9-10ths of the total mortality, see table No. 4.

Bowel complaints, especially diarrhœa and anasarca are the most untractable diseases met with in this jail, and they are also, as has been already mentioned very frequent amongst the inhabitants on this part of the coast. One of the medical officers in a report dated 3d December, 1833, speaking of diarrhœa, says "Most of the admissions were accompanied from the commencement of treatment with oedematous feet and emaciation, and the patients for the most part stated, that they had been affected with purging for two or three days previous to their coming into hospital"—and in a report dated 31st December, 1836, another medical officer writes, "Many of the cases of diarrhœa were attended with anasarca, and which was the immediate cause of death in the greatest number of the fatal cases" the same officer speaking of anasarca, under the same date, says "It is by far the most fatal disease, and is more frequent than the returns would lead one to suppose, for several cases of fever, dysentery and diarrhœa were accompanied, or became complicated with anasarca, and which cases were generally fatal." "It commences with a slight puffiness of the cheeks, in a short time the legs begin to swell, then the skin over the anterior part of the trunk becomes affected; this goes on increasing for three or four weeks, till at length the chest or the abdomen becomes the seat of effusion and causes death. The pulse is generally feeble and frequent, the tongue whitish, the urine scanty and skin dry, the bowels generally loose especially as the disease advances."

A third medical officer talking of "anasarca" in a report dated 31st December 1841, says "this disease generally runs a rapid and uncontrollable course, on this part of the coast, to a fatal termination either from effusion into the thorax or diarrhœa, and many of the inhabitants die from the disease after a short duration."

Both these maladies may be looked upon as diseases of debility, in many instances the sequelæ of malarious fever; and in their treatment tonics are essentially necessary along with the other medicines usually employed in these complaints.

JAIL OF CALICUT.

No. 3.—*Table exhibiting the Number of Admissions and Deaths of the Convicted Prisioners, from each class of disease for eleven years.*

CLASSES.	DISEASES.	From 1829 to 1840 exclusive of 1831. Aggregate strength 2564. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions & deaths from each class of disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
Fevers.....	Febris ephemera	89	1	131	4	327	26	451	17	778	43	30 ·343	5 ·527
	,, intermit quot	222	20	282	12								
	,, remittens....	16	5	37	1								
	,, com. cont....	0	0	1	0								
	Cholera..	75	45	80	44	75	45	80	44	155	89	6 ·045	57 ·419
Diseases of the abdominal viscera......	Diarrhœa..	203	24	223	28	353	39	434	54	787	93	30 ·694	11 ·817
	Dysenteria acuta et chronica.	87	15	93	24								
	Obstipatio.	19	0	72	1								
	Dyspepsia......	38	0	42	0								
	Hœmorrhois....	6	0	4	1								
	Hepatitis.	0	0	0	0								
Diseases of the Lungs.	Catarrhus.	52	6	98	3	55	7	101	4	156	11	6 ·084	7 ·051
	Asthma........	2	0	3	1								
	Phthisis pulmonalis...........	1	1	0	0								
Diseases of the Brain.	Epilepsia..	1	0	1	1	2	0	5	1	7	1	0 ·273	14 ·285
	Paralysis.......	0	0	1	0								
	Mania..........	1	0	3	0								
Eruptive fevers......	Variola.........	13	4	3	1	203	5	190	1	393	6	15 ·331	1 ·526
	Varicella.......	179	1	187	0								
	Rubeola..	9	0	0	0								
	Erysipelas......	2	0	0	0								
Dropsies..	Anasarca.......	41	13	69	17	44	14	71	18	115	32	4 ·485	27 ·826
	Ascites.........	3	1	2	1								
Rheumatic affections.	Rheumat. acutus et chronicus.	75	6	104	3	75	6	104	3	179	9	6 ·981	5 ·027
Venereal affections...	Syphilis primitiva......	7	0	6	0	11	0	14	0	25	0	0 ·975	0 ·000
	Gonorrhœa.....	2	0	3	0								
	Hernia humoralis........	2	0	5	0								
Specific diseases.....	Lepra...........	0	0	0	0	6	1	6	4	12	5	0 ·468	41 ·666
	Dracunculus....	1	0	0	0								
	Elephantiasis...	1	0	0	0								
	Atrophia.	3	1	6	4								
	Scrophula......	0	0	0	0								
	Scorbutus......	1	0	0	0								
Diseases of the eye...	Morbi Oculorum..........	17	0	11	0	17	0	11	0	28	0	1 ·092	0 ·000
Do ,, Skin.	,, Cutis.......	110	0	87	1	110	0	87	1	197	1	7 ·683	0 ·507
	Other diseases..	842	10	1034	10	842	10	1034	10	*1876	+20	73 ·166	1 ·066
	Total..	2120	153	2588	157	2120	153	2588	157	4708	310	183 ·615	6 ·584

* Of this number 714 were cases of ulcus.

+ Seven under the head ulcus, seven under the head vulnus sclopitorum et incisum, three under the head punitio—who died from dropsy and anasarca—one contusio, and two under the head inflammation external.

NOTE.—Per centage of deaths to strength 12 ·090.

JAIL OF CALICUT.

No. 4.—*Table exhibiting the number of Admissions and Deaths of the prisoners waiting for trial, from each class of disease for eleven years.*

CLASSES.	DISEASES.	From 1829 to 1840 exclusive of 1831. Aggregate strength 697. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions & deaths from each class of disease. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
Fevers.	Febris ephemera	1	0	4	0	30	5	33	6	63	11	9 ·038	17 ·460
	,, intermit quot	27	3	17	3								
	,, remittens....	2	2	12	3								
	,, com. cont....	0	0	0	0								
	Cholera.........	8	7	5	3	8	7	5	3	13	10	1 ·865	76 ·923
Diseases of the abdominal viscera......	Diarrhœa.......	14	2	23	7	30	3	38	14	68	17	9 ·756	25 ·000
	Dysenteria acuta et chronica.	11	1	10	7								
	Obstipatio.	1	0	4	0								
	Dyspepsia......	4	0	1	0								
Diseases of the Lungs.	Catarrhus.......	0	0	5	0	1	0	6	1	7	1	1 ·004	14 ·285
	Asthma.........	1	0	0	0								
	Phthisis pulmonalis..........	0	0	0	0								
	Pneumonia.....	0	0	1	1								
	Mania..........	3	1	2	0	3	1	2	0	5	1	0 ·717	20 ·000
Eruptive fevers......	Variola.........	0	0	3	0	26	0	11	0	37	0	5 ·308	0 ·000
	Varicella.......	22	0	8	0								
	Rubeola.........	4	0	0	0								
Dropsies....	Anasarca.......	5	2	5	5	5	2	5	5	10	7	1 ·434	70 ·000
	Ascites.........	0	0	0	0								
Rheumatic affections.	Rheumat. acutus et chronicus.	5	0	3	0	5	0	3	0	8	0	1 ·147	0 ·000
Venereal affections..	Syphilis primitiva...........	5	0	2	0	7	0	3	0	10	0	1 ·434	0 ·000
	Gonorrhœa......	2	0	1	0								
	Atrophia.......	2	1	0	0	2	1	0	0	2	1	0 ·286	50 ·000
Diseases of the eye...	Morbi oculorum..........	1	0	0	0	1	0	0	0	1	0	0 ·143	0 ·000
Do ,, Skin.	,, Cutis........	25	0	55	0	25	0	55	0	80	0	11 ·477	0 ·000
	Other diseases..	33	1	58	2	33	1	58	2	*91	+3	13 ·056	3 ·296
	Total..	176	20	219	31	176	20	219	31	395	51	56 ·671	12 ·911

NOTE.—Per centage of deaths to strength 7·317.

* Of this number 35 were cases of ulcus.

+ Including one death from vulnus incisum, one from icterus and one sudden death from vomiting of blood, probably aneurism.

CANTONMENT OF MANGALORE.

Situation and general description of the station, and its vicinity.

Mangalore, the principal civil and military station in Canara, is situated in East longitude 75° 4′, and in North latitude 12° 50′; it stands in the immediate vicinity of the sea, from which it is separated by a back-water, which is here formed by the junction of the Bolar, a large river arising in the ghauts, and flowing in a westerly direction past Buntwall; and the Baloore, which takes its origin in the same range, but traverses the country in its way to the coast, by a more northerly course. During the rainy season, these rivers, which surround two sides of a peninsula on which the town of Mangalore and cantonment stand, bring down a large body of water, which renders them navigable for boats of some burthen for a considerable distance inland; in the dry-season however, there is little or no stream in either, except that caused by the influence of the tide, which flows to about nine or ten miles from their mouths. The banks of these rivers, particularly that which runs by Buntwall, are steep and high, while their beds from being rocky near their sources, as they approach the coast, are composed chiefly of sand or gravel; little or no clay is deposited in the back-water, except in that part of it immediately under the cantonment, where there is an extensive, and deep bed of alluvium, resulting from the meeting of the two rivers. The banks of these rivers also, unlike most others in this country, which are covered with rank vegetation, are on the contrary where the soil permits, either planted with cocoanut trees, or laid out in gardens or rice fields.

On the cantonment side of the back-water, and immediately under some high ground, is a level belt of land which surrounds the peninsula, varying in breadth from one to two hundred yards, or thereabouts, and but little raised above the surface of the sea; on the southern extremity it is converted into rice fields, or thickly planted with cocoanut trees

and from that point northward, along the edge of the back water, the larger portion of the fishermen and labourers about the place reside. At the back of the present landing place, and on a continuation of the ground now alluded to, the great bazaar commences, and extends north on the edge of the back-water, about half a mile. It is built without attention to regularity, and there is a general want of neatness and cleanliness observable, with but few indications of its possessing much wealth; there is nevertheless a considerable native trade, carried on at the place, during the period of the coast being open for shipping. In this low situation, which the cantonment overlooks, good water is only procurable in the dry-season, and it is always more or less impregnated with iron, from the laterite through which it percolates; the small tanks in the neighbourhood are seldom dry, though in the hot weather, they become covered with slimy vegetable matter.

Appearance of surrounding country.

The general appearance of Mangalore, immediately above the belt of cocoanut trees, between it and the back-water, presents from sea, or from the distant high grounds, rather a picturesque scenery; the houses are detached, particularly those towards the north end, on separate hills, from which an extensive view is to be had, while as far as appearance is concerned, the quantity of jungle and brush-wood, on the sides of these eminences, and in the intervening valleys, add much to the beauty of the place. Immediately beyond the cantonment however, the general appearance of the country becomes considerably altered, the hills attain a greater elevation, and assume a barren, and more rugged aspect, and seem to produce little else than a scanty grass, used by the natives for thatch; or here and there patches of stunted cashew-nut trees, anacardium occidentale, and scrubby low jungle.

Cultivated valleys, and produce.

The valleys in this neighbourhood, like those throughout the country are the parts principally under cultivation; here they open towards the sea in a westerly direction, and contain, a deep rich soil, evidently

the debris of the higher grounds; much trouble appears to be taken in rendering them as productive as possible, and in many places where circumstances are favorable, the proprietor of the soil is recompensed by reaping three separate harvests, from the same field within the year, though a difference in the quality of the grain of each crop is observable; that produced immediately after the monsoon being the most abundant, and the finest grain. In addition to rice, the cultivation in this neighbourhood is confined to pepper, betel nut, and the different kinds of vegetables, which are usually found in every Indian bazaar; which from advantage being taken of the favorable nature of the soil, and command of water, are procurable in the markets throughout the greater part of the year. The higher ground being composed entirely of laterite, either in the shape of rocks, or gravel, from which every particle of soil appears to be washed away, is totally unfit to support any kind of vegetation except the poor grass, and stunted jungle already mentioned.

The greater part of the rice raised in the surrounding country, is exported to different Arabian ports, particularly to Muscat.

Roads. The communications between the different villages, and the roads generally throughout the district, are of the worst possible description; in fact beyond the immediate precincts of Mangalore, where, from the quantity of convict labour available, they are kept in repair, it is impossible for a wheeled carriage to travel in any direction; consequently the produce of the interior is brought to the coast, by the rivers which intersect the country.

Population. The population of the Mangalore talook, including that of the town, which of itself contains 11,548 inhabitants, according to a census taken in 1836 is as follows;

Hindoos.			Mahomedans.			Christians.			Total.		
Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
41,348	38,762	80,110	4,403	4,305	8,736	4,404	4.154	8,558	50,183	47,221	97,404

The majority of the inhabitants are agriculturists, and the land of any value, is portioned out into small patches, the property of private individuals. The natives are generally well clad, have houses of a superior description to those seen in other parts of the country ; and the poverty and wretchedness, existing in many of the towns to the southward, is not here met with.

There is a school at each of the roman catholic churches, under the management of private individuals, supported principally by the civil officers at the station, and the parents of the scholars, who are either of Portuguese descent, or native christians ; the latter amount to no fewer, in Canara, than 21,502, and those located here, are by far the most respectable class of natives about the place; they were originally brahmins from the Concan, who were forcibly converted to christianity, it is supposed, by the Portuguese at an early period ; and though they still retain many of the customs of their original caste, such as refraining from eating the flesh of the cow, &c. they are nevertheless extremely observant of the rites, and ceremonies of the romish church.

Harbour of Mangalore. Considerable changes have taken place in the harbour of Mangalore within the last 40 years, which have not only injured it much, in a commercial point of view, but probably may at the same time, have had some influence in rendering the station less healthy, than it was formerly known to be. The harbour was of much greater extent and depth, than it now is ; the old jetty and neighbouring stone dyke, which were constructed for the purpose

of preventing the encroachment of the sea, being now almost buried in sand, and although the tide rises 4 feet 5 inches on the bar at springs, the native craft are obliged to anchor in the narrow channels of the rivers; while between these and the shore, a flat tract of mud is now exposed at every ebb tide, or has so little water covering it in some places, as to prevent the smallest canoe from approaching the landing place. These changes in the state of the harbour, appear to have originated in the first place, from an opening having been made by the natives, through a narrow part of the back sand, to the northward of the present outlet, to permit the escape of the freshes in the river, which had caused alarm, in consequence of their having at one time, risen to a greater height than usual; into this the sea made an entry, and independent of producing the changes alluded to, has formed an extensive and permanent opening.

Climate. With respect to the climate of Mangalore it differs but little from that of the other stations on the western coast. The coldest months are those at the close, and beginning of the year, when the thermometer generally ranges between 65° and 75° F., during the 24 hours. The wind blows steadily, during the most part of this season, from the eastward, or a little to the north or southward of east; towards its close however, after calm weather, the land wind frequently comes on in gusts, which are exceedingly unpleasant, and wither up every thing of a vegetable nature. Though the diurnal variation of the thermometer, is by no means great, yet, the sudden changes of temperature which occur at times, particularly during the night, or towards morning, occasion a degree of cold, which makes a blanket often requisite, and agreeable. Between the coast and the ghauts leading into Mysore and upper Coorg, which are seen in the distance, about 40 miles in a direct line from Mangalore, there are no particular obstacles to break, or alter the current of the land wind, consequently it is much stronger, and steadier here, than further to the southward, where the ghauts approach much nearer to the coast, and are less elevated.

During the cold season, a cloud is seldom seen; the soil becomes caked, and vegetation parched up from the extreme dryness of the atmosphere, while at this time, although it may communicate to some a bracing and invigorating feeling, the generality of people complain of not being in as good health at that season, as at other periods of the year.

Towards the month of March, the heat begins sensibly to increase, and the thermometer stands at from 80°, to 86° in the shade, while in the open air at 2 P. M., it rises to 95° or 100°. As the monsoon period however approaches, and the land and sea breezes decline, or become variable and light, the mercury, within doors, for the most part stands at about 90°, during the day; and falls but little below this point in the night, until after the occurrence of a few showers of rain which usually precede the monsoon, when the sultry state of the atmosphere become immediately moderated; and as soon as the periodical rains, have fairly set in, the temperature ranges between the 75 and 82 of F.'s scale. The monsoon sets in with as great regularity at Mangalore as on other parts of the western coast; the earliest date at which the rains commenced, during a period of 11 years immediately preceding 1837, was on the 9th May 1835, and the latest was on the 10th June 1832; cholera prevailed as an epidemic, in the town and neighbouring country in the latter year. The fall of rain has varied but little as to quantity, throughout the eleven years and averaged 128 inches annually.

The climate of Mangalore, is generally considered by strangers, as having a relaxing and debilitating effect, and Europeans arriving from above the ghauts, for the most part feel a disinclination and inability to take their accustomed exercise; whilst the natives of the place on the other hand, consider the climate as particularly favorable to health.

The only documents kept at Mangalore which have reference to the health of the inhabitants of the town, are those in the hands of the priests of the principal roman catholic

church; these, which are kept up, it is believed with accuracy, exhibit the following results, from the year 1827 to 1836 inclusive. During the period mentioned, the average number of parishioners attached to this church were 2,738, the casualties amongst whom, in that time, have amounted to 681, being at the rate of 76 per annum, or in the proportion of 2, 7-10 per cent. Notwithstanding an opinion is entertained to the contrary, Mangalore is by no means unfavorable to the health of natives, either born at the place, or coming as sepoys generally do, from above the ghauts; but to the European constitution, on the other hand, the climate does not appear so well adapted, although from the want of materials from which to draw any just conclusions, no very decided opinion can be formed on this subject; it is however found to be very unfavorable to the recovery either of European or native strangers, who may fall sick while residing here, particularly when the tone of the system has been lowered to any great degree; convalescence is exceedingly tedious, and unsatisfactory, and a change of climate, in all such cases, becomes necessary; and where this cannot be taken advantage of, as often happens in the case of sepoys, atrophy followed by dysenteric symptoms, and anasarca supervene, which in a few months carry off the patient.

Military Cantonment.

The cantonment is situated on the north side of the village of Mangalore; the ground on which it stands is pretty level, and gently rises in elevation, until it reaches the place of arms, the centre and the highest part; from this the ground slopes on all sides, except towards the north east, where the elevation is continued, and is lost amongst the hilly ground in that direction.

Sepoys lines.

The sepoys lines are built on the southern side of the parade ground, with merely the high road intervening, the situation being open to the sea breeze, well raised, and easily drained in the monsoon. The huts, which are built of clay, lie in parallel lines east and west, and are thatched with grass. Good water is not procurable in the lines them-

selves, owing to their elevation, though a deep tank has been dug for the purpose of affording a supply, it is however procurable at a short distance.

Hospital. The hospital which was originally intended for the sick of two regiments, is situated in a compound at the north east end of the lines; it is well raised, dry, airy and capable of accommodating upwards of 60 patients; the building stands north and south, and is divided into three compartments, the centre or larger one measuring 81 feet in length, by 16 in breadth; while the end wards, which communicate with the former by folding doors, measure 23 by 16; three sides of the building are surrounded by a verandah 9 feet in breadth, the ends of the front verandah being partitioned off, and used as dispensaries; and tatties are placed in front of the verandahs to keep out the rains during the monsoon; there is a cookroom and necessary in the rear of the building, the latter being connected with the hospital by a covered passage. See table No. 22 for diseases.

Jail. The jail is an extensive tiled building in the form of a square, erected on an elevated piece of ground, and presenting a front of 240 feet. It is built of stone and divided into twenty apartments, ten of which are appropriated for the male convicts, two for females, one as an hospital, one as a convalescent ward, two for lunatics, one for the dispensary, and the remaining three as store rooms. All the apartments are 16 feet in breadth, but vary in length from 105 to 12 feet. The whole is calculated to accommodate 500 persons. The walls are thirteen feet in height from the floors, which are of mud, and raised three feet above the level of the surrounding yard, the drainage is therefore good, and all the rooms are perfectly dry. All the doors measure 7 feet by 4, and the windows 6 by 3 feet; the latter are strongly secured by iron bars, and have stout plank shutters, opening outwards, but which are seldom closed except to keep out the rain; all the rooms are considered to be well ventilated.

A stone wall eighteen feet high surrounds the jail, at the distance of 34 yards, thus forming a spacious enclosure, in which are the cookrooms and other out offices, and five wells of excellent water; the civil prisoners and those waiting for trial are also permitted to take exercise in this enclosure.

The hospital, convalescent ward and dispensary form one angle of the building; the hospital measures 90 feet by 16, and can accommodate sixty patients; the convalescent ward measures 52 feet by 16, and is calculated to contain forty persons.

For diet, clothing, labour &c. see statement at the end of the report.

The following tables shew the nature and amount of disease and mortality, which have occurred amongst both classes of prisoners during a period of ten years; they exhibit the diseases classified, and point out the percentage of sick to strength, and of deaths to the number of sick treated.

JAIL OF MANGALORE.

No. 5.—Table exhibiting the number of Admissions and Deaths of the Convicted Prisoners from each class of disease, for ten years.

CLASSES.	DISEASES.	From 1829 to 1839 exclusive of 1831. Aggregate strength 2109. 1st Half Ad.	Dd.	2d Half. Ad.	Dd.	Admissions & deaths from each class of disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
Fevers......	Febris ephemera	192	0	361	5	500	16	705	7	1205	23	57 ·136	1 ·908
	,, intermitquot.	300	12	340	2								
	,, remittens...	0	0	0	0								
	,, com. cont...	8	4	4	0								
	Cholera.........	88	49	71	39	88	49	71	39	159	88	7 ·539	55 ·345
Diseases of the Abdominal viscera......	Diarrhœa......	1226	69	1820	97	1436	88	3087	109	3523	197	167 ·046	5 ·591
	Dysenteria acuta et chronica..	151	19	190	11								
	Obstipatio......	55	0	73	0								
	Dyspepsia......	1	0	0	0								
	Hœmorrhois...	1	0	3	0								
	Hepatitis.......	2	0	1	1								
Diseases of the Lungs.	Catarrhus......	0	0	0	0	14	1	7	0	21	1	0 ·995	4 ·761
	Asthma........	14	1	7	0								
	Phthisis pulmonalis..........	0	0	0	0								
	Pneumonia.. ..	0	0	0	0								
Diseases of the Brain.	Apoplexia......	1	0	1	1	2	0	3	1	5	1	0 ·237	20 ·000
	Epilepsia.......	0	0	1	0								
	Mania..........	1	0	1	0								
Eruptive Fevers...	Variola.........	3	1	11	2	55	1	77	2	132	3	6 ·258	2 ·272
	Varicella.......	50	0	64	0								
	Erysipelas......	2	0	2	0								
Dropsies....	Anasarca.......	5	3	3	0	13	6	11	1	24	7	1 ·137	29 ·166
	Ascites.........	8	3	8	1								
Rheumatic affections.	Rheumat. acutus et chronicus	32	0	36	0	32	0	36	0	68	0	3 ·224	0 ·000
Venereal affections..	Syphilis primitiva..........	9	0	5	0	9	0	5	0	14	0	0 ·663	0 ·000
	,, consecutiva.	0	0	0	0								
	Gonorrhœa.....	0	0	0	0								
Specific diseases.....	Lepra..........	0	0	1	0	184	51	116	40	300	91	14 ·224	30 ·333
	Dracunculus....	0	0	1	0								
	Atrophia.......	74	47	89	40								
	Scorbutus......	109	3	22	0								
	Scrophula......	1	1	3	0								
Diseases of the Eye...	Morbi Oculorum..........	38	0	52	0	38	0	52	0	90	0	4 ·267	0 ·000
Do. Skin..	.. Cutis......	17	0	18	0	17	0	18	0	35	0	1 ·659	0 ·000
	Other diseases..	497	10	563	5	497	10	563	5	*1060	†15	50 ·260	1 ·415
	Total....	2885	222	3751	204	2885	222	3751	204	6636	426	314 ·651	6 ·419

Per centage of deaths to strength during these years, has been 20·199.

* Of this number 170 were cases of ulcer with 5 deaths.

† Including four from inflammation external, two from apostema, two from wounds and accidents, and two not particularised.

JAIL OF MANGALORE.

No. 6.—*Table exhibiting the number of Admissions and deaths of the Prisoners under Trial, from each class of disease, for ten years.*

Classes.	Diseases.	From 1829 to 1839 exclusive of 1831. Aggregate strength 762. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions & deaths from each class of disease. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
Fevers......	Febris ephemera	3	0	18	0								
	,, intermittents quot..........	12	1	41	6	16	2	59	6	75	8	9 ·842	10 ·660
	,, remittens. ..	0	0	0	0								
	,, com. cont...	1	1	0	0								
	Cholera........	27	17	2	2	27	17	2	2	29	19	3 ·805	65 ·517
Diseases of the Abdominal viscera......	Diarrhœa......	194	4	365	49								
	Dysenteria acuta et chronica.	81	8	105	13	276	12	487	62	763	74	100 ·131	9 ·698
	Obstipatio.....	1	0	17	0								
Diseases of the Lungs.	Catarrhus......	0	0	0	0								
	Asthma........	1	0	2	0	1	0	2	0	3	0	0 ·393	0 ·000
	Phthisis pulmonalis.........	0	0	0	0								
	Mania..........	13	2	5	0	13	2	5	0	18	0	2 ·462	0 ·000
Eruptive Fevers......	Variola.........	11	1	47	7	24	1	49	7	73	8	9 ·580	10 ·958
	Varicella.......	13	0	2	0								
Dropsies....	Anasarca.......	1	0	4	3	3	1	4	3	7	4	0 ·918	57 ·142
	Ascitis.........	2	1	0	0								
Rheumatic affections.	Rheumat. acutus et chronicus.	4	0	5	0	4	0	5	0	9	0	1 ·181	0 ·000
Venereal affections..	Syphilis primitiva...........	2	0	5	0	2	0	5	0	7	0	0 ·918	0 ·000
	,, consecutiva..	0	0	0	0								
Specific diseases.....	Atrophia.......	16	8	45	30								
	Scorbutus......	3	2	14	0	19	10	59	30	78	40	10 ·236	51 ·320
	Scrophula......	0	0	1	0								
Diseases of the Eye..	Morbi Oculorum...........	3	0	4	0	3	0	4	0	7	0	0 ·918	0 ·000
Do. ,, Skin.	,, Cutis......	4	0	40	0	4	0	40	0	44	0	5 ·774	0 ·000
	Other diseases..	29	2	69	6	29	2	69	6	*98	†8	12 ·860	8 ·163
	Total..	421	47	791	116	421	47	791	116	1212	163	159 ·055	13 ·448

NOTE.—Per centage of deaths to strength, 21·391.
* Of this number 45 were cases of ulcus.
† Six of which were under the head ulcus, one from vulnus sclopitorum and one from vulnus incisum.

Remarks on the preceding tables of disease.

The annual average numerical strength of the convicts has been 210, and the admissions into hospital 663, or 314·651 per cent on the strength; the total admissions being 6636, the deaths 426 from an aggregate strength of 2109 men.

The principal diseases both as to number and the mortality caused by them, have been fevers, cholera, diarrhœa, dysentery and atrophia, as the following statement will shew; in which are exhibited the admissions and deaths from the diseases each year, and also the total sick treated and mortality.

	1829.		1830.		1832.		1833.		1834.		1835.		1836.		1837.		1838.		1839.		Total.	
	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.
Fevers..................	71	2	67	0	169	3	99	2	121	1	204	2	111	1	63	0	115	11	185	1	1205	23
Cholera.................	1	1	1	1	73	40	0	0	0	0	0	0	0	0	0	0	84	46	0	0	159	88
Diarrhœa.................	121	6	145	4	377	24	348	29	270	19	464	8	366	16	233	20	331	27	391	13	3046	166
Dysentery.............	41	2	50	6	51	6	4	0	5	1	101	3	58	6	27	4	4	2	0	0	341	30
Atrophy................	0	0	1	1	13	9	2	2	4	2	29	14	23	8	33	11	46	33	12	7	163	87
Admissions and deaths from these diseases...	234	11	264	12	683	82	453	33	400	23	798	27	558	31	356	35	580	119	588	21	4914	394
Total admissions and deaths...............	584	15	506	15	957	89	624	36	520	28	880	27	668	31	474	38	687	124	736	23	6636	426
Strength each year.....	176		181		246		218		223		231		209		174		221		228		2109	
Per centage of deaths to strength............	8	·522	8	·287	36	·178	16	·513	12	·556	11	·645	14	·832	21	·839	56	·108	10	·087	20	·199
Per centage of sick to strength...............	331	·801	279	·558	389	·024	286	·238	263	·183	380	·952	319	·617	272	·413	310	·859	322	·807	314	·651

Thus it will be observed that 3-4ths of the whole admissions have been occasioned by these complaints, and nearly one half by diarrhœa alone; which 394 deaths out of 426, or nearly 12-13ths of the whole mortality, have been produced by these diseases.

Amongst the prisoners waiting for trial, see table No. 6, the same diseases have produced exactly 3-4th of the admissions or 910 out of 1212, and 6-7th of the whole mortality or 139 out of 163, from an aggregate strength of 762 men. The preceding table exhibits the annual results during the ten years amongst the convicts; but it is considered necessary to give here separately the admissions and deaths amongst the prisoners waiting for trial only for 1837. The strength during that year amounted to 371, the admissions into hospital 625, and deaths 97,

		Ad.	Dd.
of which were	Fevers	37	5
	Cholera	0	0
	Diarrhœa	315	35
	Dysentery	94	12
	Atrophy	39	28
	Total	485	80

Thus leaving to be accounted for in the remaining nine years, 587 admissions, with 66 deaths, from an aggregate strength of 391. In the following year 1838, seventeen deaths occurred under the head *cholera,* from twenty seven admissions, and eight from fifteen admissions under the head *atrophy.*

The cause of this excessive sickness and mortality in the jail, in the years 1837 and 1838, is explained in the following extract from the report of Superintending surgeon Sladen, dated 31st December 1837. "Immediately after the insurrection in Canara, (beginning of 1837,) numerous prisoners from all parts of the district were sent to the jail, to await their trial before the commission; many of these being of the higher classes of natives, who had been accustomed to indulge in the luxuries of wealth and power, were consequently less able to bear up against so sudden a change of diet, and of all their habits, in their passive confinement; their minds gave way, and although every attention consistent with their safety and situation, was shewn to them, yet many were in

such a state of despondency, that they sunk upon the first appearance of disease."

The same causes may be supposed to have operated more powerfully in the following year 1838, amongst those of the insurgents still remaining in jail; and the very great mortality amongst the convicts in that year, recorded in the foregoing table, can only thus be explained.

The ratio of sickness and mortality in this jail however, has always been high, even excluding the deaths produced by the casual visitation of cholera, in an epidemic form, as in 1832; and it has been ascribed to various causes, from time to time, such as the want of free circulation of air, from the excessive vegetation in the immediate neighbourhood of Mangalore; depressing passions of the mind, leading to disease of the digestive organs, and a state of general debility; and to the objectionable mode of preparing the prisoners food previous to the year 1839, when it was cooked in large messes, and was occasionally said to be imperfectly boiled; this system has been altered, and the prisoners are now allowed to prepare their food in small messes, according to their various castes. Some of these circumstances are applicable to other jails, where similar results have not occurred, and as the mortality continues high, and from the same diseases as above mentioned, it must be ascribed to other causes. It is known that the generality of the prisoners are inhabitants of the neighbouring hilly districts, and who, on being removed from their comparatively cool and bracing region, to the low and damp climate of the coast, (independent of the sudden change with regard to their diet and habits, and the depressing pasisons of the mind, peculiarly intense in such instances,) must suffer more from incarceration, than prisoners in other parts of the country.

The troops at Mangalore enjoy excellent health, and table No. 22, exhibits a striking contrast in regard to the health of the native troops of the garrison, and that of the prisoners in the jail.

REMARKS ON THE GENERAL TABLES.

Remarks on the General tables of Diseases.

The general table No. 7, for European troops, includes only the sick of H. M.'s Regiments at Cannanore; and, as in the corresponding tables for the preceding divisions, it exhibits the admissions into hospital and mortality, from the most important diseases, each half year, for the period of ten years, from 1829 to 1838 inclusive; the per centage of sick to strength, of deaths to sick treated, and of deaths to strength are also given; the average of these, as shewn in the abstract return No. 8, has been 153·122,—2·461,—and 3·769 respectively; the total admissions having amounted to 12,187, and the deaths to 300, from an aggregate strength of 7,959 men.

The per centage of admissions has been very high during 1835, 36, 37 and 1838, and it will be observed that this increase has been almost wholly occasioned by venereal complaints. The ratio of mortality, was also much above the average in 1834, 37 and 1838, exclusively the result of dysentery in the two first years, and in part attributable to cholera in 1838.

Fevers, dysentery, hepatitis, venereal complaints, thoracic diseases and rheumatism have been the most prevalent diseases; and the most fatal have been *dysentery, hepatitis and thoracic diseases;* the small amount of mortality from cholera, during the ten years, will not fail to be observed. The greatest mortality has occured in the second half yearly period, but the admissions in each of the half yearly periods is nearly similar.

The high ratio of mortality amongst the European troops stationed at Cannanore, during 1837 and 1838, still continues, and is chiefly the result of dysentery, as the following table will shew.

MALABAR AND CANARA.

Table No. 7.—Return of Sick of the European Troops, exhibiting the half yearly admissions and deaths from the principal diseases, and those which have been either Epidemic or Endemic.

Years.			Admissions and Deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	„ continued.	„ intermittent.	„ remittent.	Guinea worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small Pox.	Syphilis, &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & Injuries.	Other Complaints.	Average strength each year.	Annual per centage of sick to strength.	Annual per centage of deaths to sick treated.	Annual per cent'age of deaths to strength.
1829	Admitted.	1st half.	788	0	0	0	1	0	0	4	126	0	0	68	12	2	0	71	0	0	26	38	0	3	71	0	98	268	998	153 ·707	2 ·803	4 ·308
		2d „	746	0	0	0	0	0	0	9	105	0	0	86	4	1	0	56	3	0	12	11	0	3	72	0	89	292				
	Died.....	1st half.	17	0	0	0	1	0	0	0	6	0	0	2	0	1	0	3	0	0	0	0	0	0	1	0	1	2				
		2d „	26	0	0	1	0	0	0	0	11	0	0	1	0	0	0	2	1	0	0	0	0	0	6	0	1	3				
1830	Admitted.	1st half.	523	0	0	0	0	0	0	2	41	0	0	38	3	0	0	40	2	0	20	8	0	6	28	0	79	256	960	103 ·958	1 ·302	1 ·354
		2d „	475	0	0	0	0	0	0	0	59	0	0	51	4	0	0	15	1	0	13	18	0	4	27	0	66	217				
	Died......	1st half.	9	0	0	0	0	0	0	0	2	0	0	1	0	0	0	2	0	0	0	0	0	0	3	0	0	1				
		2d „	4	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1				
1831	Admitted.	1st half.	373	0	0	0	2	0	0	3	29	0	0	29	3	0	0	34	0	0	9	6	0	2	17	0	65	174	899	93 ·993	3 ·905	3 ·730
		2d „	472	0	0	0	6	0	0	3	92	0	0	49	1	5	0	27	0	0	28	17	0	2	14	0	48	180				
	Died......	1st half.	8	0	0	0	0	0	0	0	3	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0	0				
		2d „	25	0	0	0	1	0	0	0	15	0	0	3	0	0	0	0	0	0	0	0	0	0	1	0	0	5				
1832	Admitted.	1st half.	451	0	0	0	18	0	0	2	61	0	0	34	8	14	0	17	2	0	67	27	0	8	10	0	61	122	778	110 ·668	2 ·903	3 ·213
		2d „	410	0	0	0	7	0	0	5	67	0	0	59	1	4	0	16	1	0	20	22	0	9	3	0	56	140				
	Died......	1st half.	12	0	0	0	0	0	0	0	3	0	0	1	0	0	0	1	0	0	0	1	0	0	4	0	0	2				
		2d „	13	0	0	0	2	0	0	0	3	0	0	0	0	0	0	5	0	0	0	1	0	1	1	0	0	0				
1833	Admitted.	1st half.	408	1	0	0	4	0	0	11	51	0	0	37	1	1	0	15	3	0	20	17	0	6	7	0	73	158	749	114 ·285	2 ·336	2 ·670
		2d „	448	0	1	0	2	0	0	14	71	0	0	34	0	0	0	20	2	0	18	15	0	35	2	0	51	183				
	Died......	1st half.	11	1	0	0	1	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	5				
		2d „	9	0	1	0	0	0	0	0	2	0	0	0	0	0	0	4	0	0	0	0	0	1	1	0	0	0				
1834	Admitted.	1st half.	626	1	2	0	9	6	20	12	101	0	4	88	13	26	0	22	3	0	31	21	0	31	27	0	57	119	823	169 ·623	3 ·510	5 ·953
		2d „	770	2	0	0	2	22	41	13	157	0	2	90	21	5	0	32	2	0	41	31	0	35	18	0	60	190				
	Died......	1st half.	15	0	1	0	0	0	0	1	1	0	0	1	0	1	0	2	2	0	0	0	0		1	0	1	4				
		2d „	34	2	0	0	0	0	1	2	16	0	0	1	1	1	0	4	0	0	0	1	0		2	0	0	3				
1835	Admitted.	1st half.	689	1	0	0	1	16	7	16	91	0	1	73	23	1	0	28	1	0	19	22	1	107	18	0	48	185	700	201 ·857	1 ·203	2 ·428
		2d „	721	0	0	0	0	12	11	30	72	0	0	67	8	0	0	30	0	0	24	44	0	108	60	0	37	221				
	Died......	1st half.	8	1	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2				
		2d „	9	0	0	0	0	0	1	0	4	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3				
1836	Admitted.	1st half.	666	0	0	0	0	14	2	14	74	0	1	52	4	1	0	59	1	0	13	51	0	69	46	0	46	219	720	207 ·222	1 ·742	3 ·611
		2d „	826	0	1	0	0	21	2	5	136	0	0	72	2	0	0	57	2	0	18	69	0	115	55	0	51	220				
	Died......	1st half.	11	0	0	0	0	0	0	0	5	0	0	0	0	0	0	2	0	0	0	1	0	0	1	0	0	2				
		2d „	15	0	1	0	0	0	0	0	6	0	0	0	0	0	0	1	0	0	0	2	0	0	1	0	1	3				
1837	Admitted.	1st half.	801	0	0	0	2	18	1	19	120	0	0	62	11	2	0	50	1	0	16	63	0	133	40	0	41	225	675	223 ·703	2 ·715	6 ·074
		2d „	706	0	0	0	1	26	1	11	101	0	2	46	5	2	0	21	2	0	11	68	0	139	40	0	36	194				
	Died......	1st half.	25	0	0	0	0	0	0	0	15	0	0	3	0	0	0	5	0	0	0	0	0	0	1	0	0	1				
		2d „	16	0	0	0	0	0	0	0	11	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	2				
1838	Admitted.	1st half.	626	0	0	0	0	26	1	6	106	0	0	67	1	3	0	27	2	0	16	61	0	82	36	0	51	141	657	195 ·129	2 ·274	5 ·022
		2d „	656	0	0	0	21	21	1	11	112	0	1	71	1	2	0	38	2	0	29	52	0	110	36	0	30	115				
	Died......	1st half.	10	0	0	0	0	0	0	0	7	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0				
		2d „	23	0	0	0	8	0	0	0	11	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0				

Table No. 8.—Europeans.—Abstract of the preceding Return shewing the Total number of Admissions and Deaths, &c. from 1829 to 1838.

	Admissions and deaths.	Diseases. Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.
Aggregate Strength. 7,959.											
Admitted..... 1st half.	5,954	3	2	0	37	80	31	119	803	0	6
Admitted..... 2d half.	6,233	2	2	0	39	105	59	101	972	0	5
Total...	12,187	5	4	0	76	185	90	220	1,775	0	11
Died.......... 1st half.	126	2	1	0	2	0	0	4	44	0	0
Died.......... 2d half.	174	2	2	1	11	0	2	2	81	0	0
Total...	300	4	3	1	13	0	2	6	125	0	0
Per centage of sick to strength.	153 ·122	0 ·062	0 ·050	0	0 ·954	2 ·324	1 ·130	2 ·764	22 ·301	0	0 ·138
Per centage of deaths to sick treated.	2 ·461	80 ·000	75 ·000	0	17 ·105	0	2 ·222	2 ·727	7 ·042	0	0
Per centage of deaths to strength.	3 ·769	0 ·050	0 ·037	0 ·012	0 ·163	0	0 ·250	0 ·075	1 ·570	0	0

	Diseases. ,, continued	,, intermittent.	,, remittent.	Guinea Worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & injuries.	Other Complaints.
Aggregate Strength. 7,959.															
Admitted..... 1st half.	548	79	50	0	363	15	0	237	314	1	450	330	0	619	1867
Admitted..... 2d half.	625	50	19	0	312	15	0	214	350	0	560	327	0	524	1952
Total...	1,173	129	69	0	675	30	0	451	664	1	1010	657	0	1143	3819
Died.......... 1st half.	9	0	2	0	23	2	0	0	2	0	0	14	0	2	19
Died.......... 2d half.	7	1	1	0	19	1	0	0	4	0	2	16	0	2	20
Total...	16	1	3	0	42	3	0	0	6	0	2	30	0	4	39
Per centage of sick to strength.	14 ·738	1 ·620	0 ·866	0	8 ·480	0 ·376	0	5 ·665	8 ·342	0 ·012	12 ·690	8 ·254	0	14 ·361	47 ·983
Per centage of deaths to sick treated.	1 ·364	0 ·775	4 ·347	0	6 ·222	10 ·000	0	0	0 ·903	0	0 ·168	4 ·566	0	0 ·349	1 ·027
Per centage of deaths to strength.	0 ·201	0 ·012	0 ·037	0	0 ·527	0 ·037	0	0	0 ·075	0	0 ·025	0 ·376	0	0 ·050	0 ·490

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Table No. 9.—Return of sick of the Native Troops exhibiting the half yearly admissions and deaths from the principal diseases, and those which have been either Epidemic or Endemic.

Years.			Admissions and Deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	,, continued.	,, intermittent.	,, remittent.	Guinea worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small Pox.	Syphilis, &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & Injuries.	Other Complaints.	Average strength each year.	Annual per centage of sick to strength.	Annual per centage of deaths to sick treated.	Annual per centage of deaths to strength.
1829	Admitted.	1st half.	1151	0	0	0	4	42	0	23	12	0	0	4	66	2	0	0	0	0	15	129	3	56	9	0	82	704	5930	43 ·035	1 ·841	0 ·792
		2d ,,	1401	2	10	0	0	0	0	35	14	0	0	4	60	5	0	0	4	0	29	127	0	37	17	0	77	980				
	Died.	1st half.	18	0	0	0	2	1	0	1	1	0	0	0	0	1	0	0	0	0	0	3	2	0	2	0	0	5				
		2d ,,	29	2	4	0	0	0	0	0	3	0	0	0	1	2	0	0	0	0	0	3	0	1	3	0	0	10				
1830	Admitted.	1st half.	1437	2	2	0	92	0	0	27	8	0	0	2	119	17	0	1	2	0	14	93	2	31	19	0	85	921	5601	53 ·901	2 ·484	1 ·339
		2d ,,	1582	0	0	0	2	0	0	27	18	0	6	5	111	9	0	0	5	0	15	101	0	40	15	0	92	1133				
	Died.	1st half.	56	2	2	0	36	0	0	0	1	0	0	0	2	0	0	0	0	0	0	2	1	0	5	0	1	4				
		2d ,,	19	0	1	0	0	0	0	1	3	0	0	0	5	0	0	0	0	0	0	1	0	1	1	0	0	6				
1831	Admitted.	1st half.	1108	0	2	0	4	0	0	21	19	0	5	8	56	3	0	6	0	0	31	98	0	52	18	0	108	674	5008	47 ·264	1 ·563	0 ·738
		2d ,,	1259	0	0	0	8	0	0	11	36	0	30	9	72	7	0	7	1	0	13	96	0	34	19	0	105	811				
	Died.	1st half.	16	0	2	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	9				
		2d ,,	21	0	0	0	2	0	0	2	1	0	1	1	1	1	0	1	0	0	0	1	0	0	3	0	0	7				
1832	Admitted.	1st half.	904	0	0	0	35	0	0	18	13	0	13	8	53	2	0	3	0	0	15	79	0	24	13	0	105	523	4569	43 ·904	2 ·691	1 ·181
		2d ,,	1102	1	1	0	6	0	0	16	26	0	21	68	54	6	0	6	2	1	16	90	0	21	22	0	79	666				
	Died.	1st half.	26	0	0	0	8	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	6	0	2	7				
		2d ,,	28	1	1	0	1	0	0	1	3	0	0	3	2	0	0	0	0	1	0	4	0	0	2	0	0	9				
1833	Admitted.	1st half.	696	1	0	0	1	0	0	13	6	0	69	16	49	1	0	0	3	0	9	50	0	26	6	0	66	380	2853	50 ·543	2 ·357	1 ·191
		2d ,,	746	0	0	0	1	0	0	7	16	0	7	9	66	1	0	1	2	0	4	61	0	39	8	0	43	481				
	Died.	1st half.	13	0	0	0	0	0	0	2	1	0	2	1	2	0	0	0	0	0	0	1	0	0	1	0	0	3				
		2d ,,	21	0	0	0	1	0	0	0	3	0	1	0	2	1	0	0	1	0	0	0	0	0	5	0	1	6				
1834	Admitted.	1st half.	1112	0	1	0	1	74	0	69	18	0	96	14	191	8	1	1	3	0	8	111	1	56	27	1	126	305	3098	67 ·010	2 ·456	1 ·646
		2d ,,	964	0	4	1	1	231	0	11	21	0	30	15	140	3	0	0	3	0	16	81	12	56	21	0	55	263				
	Died.	1st half.	28	0	0	0	0	0	0	4	2	0	0	1	7	1	0	0	0	0	0	2	0	0	4	0	4	3				
		2d ,,	23	0	1	1	1	0	0	2	0	0	0	0	3	0	0	0	0	0	0	0	0	1	3	0	2	9				
1835	Admitted.	1st half.	874	0	1	0	0	114	0	13	15	0	104	10	181	1	0	1	5	0	4	79	3	40	27	0	50	226	2703	64 ·964	2 ·448	1 ·590
		2d ,,	882	1	2	0	0	181	1	26	19	0	84	3	89	1	5	0	1	0	10	88	1	32	15	0	69	251				
	Died.	1st half.	21	0	1	0	0	0	0	3	2	0	1	0	1	0	0	0	0	0	0	6	0	0	4	0	0	3				
		2d ,,	22	0	1	0	0	0	0	4	4	0	2	0	1	0	0	0	0	0	0	2	0	1	3	0	0	4				
1836	Admitted.	1st half.	750	1	6	0	1	82	0	19	9	0	57	4	157	1	1	1	5	0	7	93	0	22	9	0	65	210	2502	58 ·553	1 ·979	1 ·159
		2d ,,	715	0	3	0	1	145	1	19	19	0	40	10	54	3	1	0	2	0	8	73	3	35	23	0	42	233				
	Died.	1st half.	18	0	0	0	1	0	0	2	1	0	2	0	2	0	0	1	0	0	0	0	0	0	3	0	0	6				
		2d ,,	11	0	0	0	1	0	0	1	2	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	3				
1837	Admitted.	1st half.	1258	0	10	0	0	102	0	73	22	0	85	16	256	9	1	3	1	0	8	94	1	55	19	0	126	347	3535	58 ·562	1 ·189	1 ·018
		2d ,,	1769	0	9	0	0	319	2	93	38	0	77	14	199	9	0	5	2	0	20	209	0	67	37	0	94	575				
	Died.	1st half.	11	0	2	0	0	0	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	3				
		2d ,,	25	0	1	0	0	0	0	5	4	0	0	1	3	0	0	1	0	0	0	1	0	1	5	0	0	3				
1838	Admitted.	1st half.	1626	0	4	0	107	220	0	77	32	0	129	13	191	7	3	1	1	0	18	172	11	59	42	0	97	439	3941	75 ·000	3 ·414	2 ·560
		2d ,,	1332	0	5	0	3	223	0	53	21	0	79	4	107	13	0	1	4	0	14	132	5	57	20	0	93	498				
	Died.	1st half.	73	0	2	0	43	0	0	6	2	0	0	0	2	2	0	0	0	0	0	2	1	1	1	0	0	11				
		2d ,,	28	0	2	0	2	0	0	5	3	0	0	1	2	1	0	0	0	0	0	0	0	0	3	0	2	7				

Table No. 10.—Natives.—Abstract of the preceeding Return, shewing the Total number of Admissions and Deaths, &c. from 1829 to 1838.

	Admissions and Deaths.	Diseases. Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever Ephemeral.	,, continued.	,, intermittent.	,, remittent.
Aggregate Strength, 39,743.														
Admitted..... 1st half.	10,916	4	26	0	245	631	0	356	154	0	558	125	1322	51
Admitted..... 2d half.	11,752	4	34	1	22	1102	4	298	228	0	374	141	952	57
Total...	22;668	8	60	1	267	1736	4	654	382	0	932	266	2274	108
Died.......... 1st half.	280	2	9	0	90	1	0	21	12	0	6	3	18	4
Died.......... 2d half.	227	3	11	1	8	0	0	21	26	0	4	6	22	5
Total...	507	5	20	1	98	1	0	42	38	0	10	9	40	9
Annual per centage of sick to strength.	57 ·036	0 ·020	0 ·150	0 ·002	0 ·671	4 ·368	0 ·010	1 ·645	0 ·961	0	2 ·345	0 ·669	5 ·721	0 ·271
Annual per centage of deaths to sick treated.	2 ·236	62 ·500	33 ·333	100 ·000	36 ·704	0 ·057	0	6 ·422	9, ·947	0	1 ·072	3 ·383	1 ·759	8 ·333
Annual per centage of deaths to strength.	1 ·275	0 ·012	0 ·050	0 ·002	0 ·246	0 ·002	0	0 ·105	0 ·095	0	0 ·025	0 ·022	0 ·100	0 ·022

	Guinea worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & injuries.	Other complaints.
Aggregate Strength, 39,743.												
Admitted..... 1st half.	6	17	20	0	129	998	21	421	189	1	910	47
Admitted..... 2d half.	6	20	26	1	145	1061	21	418	197	0	749	58
Total...	12	37	46	1	274	2059	42	839	386	1	1659	106
Died.......... 1st half.	0	1	0	0	0	18	4	1	28	0	8	[illegible]
Died.......... 2d half.	0	2	1	1	0	12	0	5	30	0	5	[illegible]
Total...	0	3	1	1	0	30	4	6	58	0	13	1
Annual per centage of sick to strength.	0 ·030	0 ·093	0 ·115	0 ·002	0 ·689	5 ·180	0 ·105	2 ·111	0 ·971	0 ·002	4 ·174	26 ·7
Annual per centage of deaths to sick treated.	0	8 ·108	2 ·173	100 ·000	0	1 ·457	9 ·523	0 ·715	15 ·025	0	0 ·783	1 ·
Annual per centage of deaths to strength.	0	0 ·007	0 ·002	0 ·002	0	0 ·075	0 ·010	0 ·015	0 ·145	0	0 ·032	0 ·2

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No. 11.—*Table exhibiting the number of Admissions, and Deaths from each class of Disease, for 5 years.*

EUROPEAN TROOPS.

CLASSES.	DISEASES.	From 1831 to 1838. Aggregate strength 3,575. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions and Deaths from each class of Disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
Fevers......	Febris ephemera	6	0	5	0	433	5	400	5	833	10	23 ·300	1 ·200
	,, intermittent quot.........	52	0	38	1								
	,, tertiana....	0	0	2	0								
	,, remittens...	33	1	9	1								
	,, continua...	312	4	346	3								
	Cholera.........	12	0	24	8	12	0	24	8	36	8	1 ·006	22 ·222
Diseases of the abdominal viscera......	Dysenteria acuta	486	30	574	46	492	30	578	48	1070	78	29 ·930	7 ·289
	,, chronica...	6	0	4	2								
	Diarrhœa	97	2	70	2	400	3	411	7	811	10	22 ·685	1 ·233
	Colica..........	91	0	93	0								
	Obstipatio......	72	0	77	0								
	Hæmorrhois.....	107	0	129	0								
	Enteritis.	3	0	1	0								
	Peritonitis.	1	0	5	4								
	Gastritis........	0	0	2	1								
	Dyspepsia.	26	1	31	0								
	Hepatitis acuta	161	7	140	4	186	11	178	8	364	19	10 ·181	5 ·219
	,, chronica. ..	25	4	38	4								
Diseases of the Lungs and Heart.	Catarrhus.	165	1	163	0	197	6	209	6	406	12	11 ·356	2 ·955
	Asthma..	2	0	5	0								
	Phthisis pulmonalis.........	1	3	8	2								
	Hœmoptysis....	5	0	1	0								
	Pleuritis.	0	0	0	0								
	Pneumonia.	18	1	27	1								
	Carditis.........	4	1	3	2								
	Palpitatio.......	2	0	1	0								
	Dyspnœa.......	0	0	1	1								
Diseases of the Brain.	Apoplexia......	2	1	2	2	90	3	106	4	196	7	5 ·482	3 ·571
	Epilepsia.......	13	0	19	0								
	Paralysis.......	5	0	1	0								
	Cephalalgia....	31	0	17	0								
	Phrenitis.......	0	0	0	0								
	Ictus solis......	0	0	0	0								
	Amentia........	3	1	4	0								
	Mania..........	5	1	4	0								
	Hydrophobia....	0	0	0	0								
	Delirium Tremens........	3	0	7	2								
	Ebrietas........	28	0	52	0								
Diseases of the Eye..	Morbi oculorum..........	95	0	123	0	95	0	123	0	218	0	6 ·097	0 ·000
do ,, Skin	,, cutis........	80	0	105	0	80	0	105	0	185	0	5 ·174	0 ·000
Eruptive Fevers......	Variola.........	0	0	0	0	3	0	2	0	5	0	0 ·139	0 ·000
	Varicella.	1	0	0	0								
	Rubeola.	0	0	0	0								
	Scarlatina......	0	0	0	0								
	Erysipelas.	2	0	2	0								
Dropsies..	Anasarca.......	8	1	9	4	13	3	10	5	23	8	0 ·643	34 ·782
	Ascites..	5	2	1	1								
	Hydrothorax...	0	0	0	0								
Rheumatic affections.	Rheumatismus acutus........	203	1	243	0	222	1	270	3	492	4	13 ·762	0 ·813
	,, chronicus. .	15	0	21	3								
	Neuralgia......	0	0	0	0								
	Odontalgia......	4	0	6	0								
Venereal affections....	Syphilis primitiva......... ..	183	0	235	0	425	0	507	0	932	0	26 ·069	0 ·000
	,, consecutiva	7	0	9	0								
	Gonorrhœa.....	199	0	231	0								
	Hernia humoralis......... ..	32	0	30	0								
	Strictura urethrae.........	4	0	2	0								
Specific diseases.. ..	Atrophia.	2	1	1	1	11	1	7	1	18	2	0 ·503	11 ·111
	Beriberi........	0	0	0	0								
	Elephantiasis...	0	0	0	0								
	Lepra..	0	0	0	0								
	Dracunculus. ..	0	0	0	0								
	Ulcus phagedenicum........	0	0	0	0								
	Scrophula..	1	0	3	0								
	Scorbutus..	8	0	3	0								
Punishment.	Punitus........	10	0	22	0	10	0	22	0	32	0	0 ·895	0 ·000
Wounds and injuries...	Fractura........	4	0	9	0	243	1	214	1	457	2	12 ·783	0 ·437
	Luxatio....... ..	1	0	4	0								
	Subluxatio......	37	0	35	0								
	Vulnus sclopitorum........	5	0	1	1								
	,, incisum.....	32	0	34	0								
	Contusio........	159	1	127	0								
	Ambustio..	5	0	4	0								
Other diseases, including Phlogosis, Ulcus, &c............		499	5	516	1	499	5	516	1	*1015	†6	28 ·391	0 ·591
	Total.......	3411	69	3682	97	3411	69	3682	97	7093	166	198 ·405	2 ·340

Average per centage of deaths to strength during these five years, has been 4·647.

* Of this number were

Phlogosis...........	..281	0
Do. do. Ulcus.........	390	1
Do. do. Bubo simplex.	152	0
	823	1

† The deaths under this head include besides the one accounted for in the preceding note, 2 from aneurisma, 1 from apostema lumborum, 1 from nephritis and one not particularised.

MALABAR AND CANARA.

No. 12.—*Table exhibiting the number of Admissions, and Deaths from each class of Disease, for 5 years.*

NATIVE TROOPS.

CLASSES.	DISEASES.	From 1834 to 1838. Aggregate strength 15,782. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions & deaths from each class of disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
Fevers......	Febris ephemera	471	4	310	2								
	,, intermittent quot.........	920	13	546	11								
	,, tertiana.....	59	0	43	0	1563	22	974	16	2537	38	16 ·075	1 ·497
	,, remittens ..	26	3	29	1								
	,, continua....	87	2	46	2								
	Cholera.........	109	44	5	4	109	44	5	4	114	48	0 ·722	42 ·105
Diseases of the Abdominal viscera......	Dysenteria acuta	93	8	107	11								
	,, chronica...	3	0	11	2	96	8	118	13	214	21	1 ·355	9 ·813
	Diarrhœa	251	15	202	17								
	Colica.........	72	0	67	2								
	Obstipatio......	25	2	37	1								
	Hœmorrhois. ..	12	0	19	0								
	Enteritis.	1	0	2	1	476	25	459	22	935	47	5 ·924	5 ·026
	Peritonitis......	0	0	0	0								
	Gastritis.	0	0	1	0								
	Dyspepsia......	115	8	131	1								
	Hepatitis acuta	4	0	4	0								
	,, chronica...	3	1	2	1	7	1	6	1	13	2	0 ·082	15 ·384
Diseases of the Lungs and Heart.	Catarrhus......	69	7	69	7								
	Asthma........	28	0	25	1								
	Phthisis pulmonalis.........	8	4	7	4								
	Hœmoptysis. ..	4	0	1	0								
	Pleuritis.	0	0	0	0	124	13	116	16	240	29	1 ·520	12 ·083
	Pneumonia.. ..	9	2	9	4								
	Carditis........	0	0	0	0								
	Palpitatio......	0	0	0	0								
	Dyspnœa..... ..	6	0	5	0								
Diseases of the Brain.	Apoplexia......	1	0	1	0								
	Epilepsia.......	3	0	5	3								
	Paralysis.......	5	1	8	1								
	Cephalalgia.. ..	19	0	26	0								
	Phrenitis......	0	0	0	0								
	Ictus solis......	0	0	0	0								
	Amentia........	10	0	6	0	46	2	65	5	111	7	0 ·703	6 ·306
	Mania..........	5	0	6	0								
	Hydrophobia...	0	0	0	0								
	Delirium Tremens...........	3	1	13	1								
	Ebrietas........	0	0	0	0								
Diseases of the Eye...	Morbi Oculorum..........	45	0	68	0	45	0	68	0	113	0	0 ·716	0 ·000
Do. Skin..	.. Cutis......	592	0	1102	0	592	0	1102	0	1694	0	10 ·733	0 ·000
Eruptive Fevers...	Variola.........	8	1	5	0								
	Varicella.	8	0	16	0								
	Rubeola........	25	0	25	0	43	1	49	0	92	1	0 ·582	1 ·086
	Scarlatina......	0	0	0	0								
	Erysipelas......	2	0	3	0								
Dropsies....	Anasarca.......	16	5	21	4								
	Ascites.........	2	1	3	2	19	7	24	6	43	13	0 ·272	30 ·232
	Hydrothorax...	1	1	0	0								
Rheumatic affections.	Rheumatismus acutus........	329	8	345	3								
	,, chronicus.	220	2	238	0								
	Neuralgia......	0	0	0	0	558	10	594	3	1152	13	7 ·299	1 ·128
	Odontalgia.....	9	0	11	0								
Venereal affections ..	Syphilis primitiva..........	114	1	124	1								
	,, consecutiva.	25	0	41	0								
	Gonorrhœa.....	43	0	42	1								
	Hernia humoralis............	44	0	37	0	232	1	246	3	478	4	3 ·030	0 ·836
	Strictura urethrae.........	6	0	2	1								
Specific diseases.....	Atrophia........	22	5	23	5								
	Beriberi........	0	0	1	1								
	Elephantiasis...	0	0	0	0								
	Lepra..........	0	0	0	0								
	Dracunculus....	6	0	6	0	42	5	40	6	82	11	0 ·519	13 ·414
	Ulcus phagedenicum........	1	0	0	0								
	Scrophula......	12	0	9	0								
	Scorbutus......	1	0	1	0								
Punishment.	Punitus........	6	0	6	0	6	0	6	0	12	0	0 ·076	0 ·000
Wounds and Injuries ..	Fractura.......	2	0	1	0								
	Luxatio.........	1	0	0	0								
	Subluxatio......	20	0	34	0								
	Vulnus sclopitorum.........	96	4	8	1	464	5	353	4	817	9	5 ·176	1 ·101
	,, incisum....	75	0	71	1								
	Contusio...	260	1	230	2								
	Ambustio......	10	0	9	0								
Other diseases, including Phlogosis, Ulcus, &c.		1198	7	1437	10	1198	7	1437	10	*2635	†17	16 ·695	0 ·645
	Total....	5620	151	5662	109	5620	151	5662	109	11282	260	71 ·486	2 ·304

Average per centage of deaths to strength during these five years, has been 1·647.

* Of this number were

	Phlogosis............	1052	5
Do.	do. Ulcers........	1216	2
Do.	do. Bubo simplex.	265	1
		2533	8

† The deaths under this head include besides those in the preceding note, three from tetanus, two from icterus, one from melancholia, one from hernia strangulata one from prolapsus ani and one from diabetes.

MALABAR AND CANARA.

No. 13.—*Table exhibiting the Admissions and Deaths from the most particular diseases, amongst the European and Native Troops in the Malabar and Canara Division of the Army, during the ten years from* 1829 *to* 1838 *inclusive, with the proportion each bears to the total number of Admissions and Deaths.*

		Cholera.		Fevers.		Dysentery.		Hepatitis.		Diarrhœa.		Thoracic diseases.		Rheumatism.		Syphilis.		Total from these diseases.	
		Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.
Europeans.																			
Total Admissions..	12,187.	76	$\frac{1}{160}$	1,382	$\frac{1}{9}$	1,775	$\frac{1}{7}$	675	$\frac{1}{18}$	220	$\frac{1}{55}$	657	$\frac{2}{37}$	664	$\frac{1}{18}$	1,010	$\frac{1}{12}$	6,459	$\frac{8}{15}$
„ Deaths......	300.	13	$\frac{1}{23}$	20	$\frac{1}{15}$	125	$\frac{5}{12}$	42	$\frac{1}{7}$	6	$\frac{1}{50}$	30	$\frac{1}{10}$	6	$\frac{1}{50}$	2	$\frac{1}{150}$	244	$\frac{4}{5}$
Natives.																			
Total Admissions...	22,668.	267	$\frac{1}{85}$	3,580	$\frac{3}{19}$	382	$\frac{1}{59}$	37	$\frac{1}{612}$	654	$\frac{2}{69}$	386	$\frac{2}{117}$	2,059	$\frac{1}{11}$	839	$\frac{1}{27}$	8,204	$\frac{4}{11}$
„ Deaths......	507.	98	$\frac{1}{5}$	68	$\frac{1}{7}$	38	$\frac{1}{13}$	3	$\frac{1}{169}$	42	$\frac{1}{12}$	58	$\frac{1}{9}$	30	$\frac{1}{17}$	6	$\frac{1}{84}$	343	$\frac{2}{3}$

No. 14.—*The following table shews the per centage of Admissions from the same diseases to the strength, of Deaths to the sick treated, and of Deaths to the strength; it exhibits also the difference in these respects amongst the European and Native sick.*

	Cholera.		Fevers.		Dysentery.		Hepatitis.		Diarrhœa		Thoracic diseases.		Rheumatism.		Syphilis.		Total from these diseases.		Grand Total.	
	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.
European Troops. STRENGTH, 7,959																				
Per centage of Admissions to strength............	76	0·954	1382	17·364	1775	22·301	675	8·480	220	2·764	657	8·254	664	8·342	1010	12·690	6459	81·153	12,187	153·122
„ of Deaths to sick treated.	13	17·105	20	1·447	125	7·042	42	6 222	6	2·727	30	4·566	6	0·903	2	0·198	244	3·762	300	2·461
„ of Deaths to strength....	13	0·163	20	0·251	125	1·570	42	0·527	6	0·075	30	0·376	6	0·075	2	0·025	244	3·065	300	3·769
Native Troops. STRENGTH, 39,743																				
Per centage of Admissions to strength............	267	0·671	3580	9·010	382	0·961	37	0·093	654	1·645	386	0·971	2059	5·180	839	2·111	8204	20·642	22,668	57·036
„ of Deaths to sick treated.	98	36·704	68	1 896	38	9·947	3	8·108	42	6·422	58	15·025	30	1·457	6	0·715	343	4·180	507	2·236
„ of Deaths to strength...	98	0·246	68	0·171	38	0·095	3	0·007	42	0·105	58	0·145	30	0 075	6	0·015	343	0·863	507	1·257

No. 15.—*Table shewing the amount of admissions and Deaths from the principal classes of disease, for the period of five years, from* 1834 *to* 1838 *inclusive, with the proportions of admissions from each to the total of sick treated, and of deaths to the total mortality.*

	Fevers.		Cholera.		Dysentery.		Abdominal complaints.		Diseases of the Liver.		Diseases of the Lungs.		Diseases of the Brain.		Dropsies.		Rheumatic affections.		Venereal complaints.	
	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.
European Troops.																				
Total Admissions...... 7093	833	2/17	36	1/197	1070	2/13	811	2/17	364	1/19	406	1/17	196	1/36	23	1/308	492	1/14	932	2/15
„ Deaths........ 166	10	2/31	8	1/21	78	1/3	10	2/31	19	1/9	12	1/14	7	1/24	8	1/21	4	1/41	0	0
Native Troops.																				
Total Admissions ...11282	2537	1/5	114	1/99	214	1/52	935	1/12	13	1/869	240	1/47	111	1/100	43	1/262	1152	2/19	478	2/47
„ Deaths........ 260	38	1/7	48	1/5	21	1/12	47	2/11	2	1/130	29	1/9	7	1/37	13	1/20	13	1/20	4	1/65

No. 16.—*Table exhibiting the per centage of Admissions from the same classes of disease to the strength, of Deaths to sick treated, and of Deaths to strength, both amongst European and Native troops.*

	Fevers.		Cholera.		Dysentery.		Abdominal complaints.		Diseases of the Liver.		Diseases of the Lungs.		Diseases of the Brain.		Dropsies.		Rheumatic affections.		Venereal complaints.	
	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.
European Troops. STRENGTH, 3575.																				
Per centage of sick to strgth.	833	23·300	36	1·006	1070	29·930	811	22·685	364	10·181	406	11·356	196	5·482	23	0·643	492	13·762	932	26·069
„ of deaths to sick treated.	10	1·200	8	22·222	78	7·289	10	1·233	19	5·219	12	2·955	7	3·571	8	34·782	4	0·813	0	0·000
„ of deaths to strength...	10	0·279	8	0·223	78	2·181	10	0·279	19	0·532	12	0·335	7	0·195	8	0·223	4	0·111	0	0·000
Native Troops. STRENGTH, 15782.																				
Per centage of sick to strgth.	2537	16·075	114	0·722	214	1·355	935	5·924	13	0·082	240	1·520	111	0·703	43	0·272	1152	7·299	478	3·030
„ of deaths to sick treated.	38	1·497	48	42·105	21	9·813	47	5·026	2	15·384	29	12·083	7	6·306	13	30·232	13	1·128	4	0·836
„ of deaths to strength..	38	0·240	48	0·304	21	0·133	47	0·297	2	0·012	29	0·183	7	0·044	13	0·082	13	0·082	4	0·025

No. 17.—*Table exhibiting the amount of sickness and mortality amongst the European Troops stationed at Cannanore, during the years* 1839, 40 *and* 1841.

Years.			Admissions and deaths.	Apoplexy.	Cholera.	Fevers.	Dysentery.	Hepatitis.	Diarrhœa.	Thoracic Diseases.	Rheumatism.	Syphilis.	Average strength each year.	Annual per centage of sick to strength.	Annual percentage of deaths to sick treated.	Annual percentage of deaths to strength.
1839	Admitted.	1st Half.	530	2	0	50	94	20	42	47	34	50	593	167 ·790	3 ·115	5 ·227
		2d Half.	465	0	0	51	122	19	39	54	26	18				
	Died.	1st Half.	4	1	0	0	2	0	1	0	0	0				
		2d Half.	27	0	0	4	17	4	1	0	1	0				
1840	Admitted.	1st Half.	672	1	0	70	185	77	26	63	34	54	659	205 ·007	4 ·737	9 ·711
		2d Half.	679	0	0	43	224	71	25	61	24	35				
	Died.	1st Half.	37	1	0	3	28	5	0	0	0	0				
		2d Half.	27	0	0	1	20	5	0	0	0	0				
1841	Admitted.	1st Half.	783	0	0	71	195	53	67	87	21	27	812	241 ·502	2 ·396	5 ·788
		2d Half.	1178	0	0	148	233	77	95	185	21	37				
	Died.	1st Half.	16	0	0	1	8	5	0	1	0	0				
		2d Half.	31	0	0	5	14	5	3	2	0	0				

The medical Officers in charge of H. M.'s Regiments mention, as the principal causes of these grave diseases,-dysentery and hepatitis,-besides the general effects of a tropical climate, insufficient accommodation for the men in barracks, and want of due ventilation;-the intemperate habits of the soldiery, and exposure when in a state of intoxication. The opinion on this point of the superintending surgeon is given in the following extracts from his general reports, on the health of the troops for 1837, 40 and 1841.

"Dysentery has prevailed to a great extent, and has proved more fatal during the past six months than for many years previously; it has its origin in my opinion, principally from intemperance, and the exposure consequent thereon; nor do I see any prospect of preventing the disease amongst the European soldiery, whilst they have every facility for procuring pernicious fermented liquors so common at Cannanore. The mortality from dysentery has been 15, from hepatitis 5, and from fever 3. Dated 1st July 1837.

The same Authority, talking of the causes of the increase of sickness and mortaility in 1840 and 1841, says, "I am "of opinion that intemperance in the use of partially

"fermented and drugged liquors, with subsequent exposure "to cold, wet and malaria, may be set down as the principal "sources of disease, amongst the European soldiery stationed "at Cannanore. From the boundaries of the esplanade, up "to the houses in the camp bazaar, and entirely surrounding "it, up to the sepoy barracks, the ground is laid out in small "gardens, in each of which is placed a *tier* or *moplah* family; "the gardens are crowded to excess with trees; and a lux- "uriant rank vegetation, during the rainy season covers the "surface; this gives the cantonment when viewed from an "eminence the appearance of a dense jungle, from the boun- "daries of the esplanade quite up to the sepoy lines, and is "no doubt a fertile source of malaria.

"The European soldiery frequent the camp bazaar, when- "ever an opportunity offers; and although the dealers in tod- "dy and arrack are restricted from selling them to the troops, "yet the proof is too positive (to admit of any doubt) of "their getting as mueh as they please, from the different "states in which the men are often seen returning from the "bazaar, to that in which they entered it.

"I have good reason to believe, that the toddy and arrack "are brought for them to private houses and gardens; for a "guard patroles the bazaar, to prevent any from being re- "ceived from the shops; and a peon is stationed near every "shop for the same purpose, so that if these people do their "duty, (which is doubtful) the soldiers must receive it from "some clandestine source.

"Cannanore, some 15 or 20 years back, was considered one "of the most healthy stations in India; at that period "I am informed, that the same facility of obtaining arrack "and toddy, did not exist as at present; the bazaar is now "studded with licensed dealers in spirits." There is now "not a a spare nook or corner, but which is thickly planted "with trees close up to the road side, thereby checking the "free circulation of air, and tending to the production of "malaria."

" From the great mortality that has taken place amongst " the European soldiery within these two years, it behoves " all concerned to endeavour to remove whatever may be " considered the source of disease; I am decidedly of opini- " on, that the cantonment generally, should be cleared from " all superfluous trees, and that in future none should be al- " lowed to be planted nearer than within 50 feet of each " other; this might easily be accomplished, as the ground in " most instances is in possession of the servants of officers, " or their relations and connextions, and who have no further " right, than that of its being originally granted by officers, " commanding the cantonment, and which might, to produce " a salutary purpose, be so far resumed, as to remove the " present overgrown jungle, and restrict its growth in future. " The trees planted on the road sides, should also be occasi- " onally trimmed, so as not to be allowed to project too far, " except at a height that would not interfere with a man rid- " ing on horseback."

The Tables No. 9 and 10, shew the amount of the same diseases and mortality, which have occurred amongst the native troops at head quarters, and at the various out-stations in this division, during the same period of ten years.

Fevers, rheumatism, cutaneous diseases, and venereal complaints, constitute the most numerous admissions, and the mortality has chiefly resulted from *cholera, fevers, thoracic diseases, bowel complaints and rheumatism.*

The total admissions into hospital have amounted to 22,668, and the total deaths have been 507, from an aggregate strength of 39743 men. The average per centage of sick to strength has been 57·036; of deaths to sick treated 2·236; and of deaths to strength 1·275.

These averages have been pretty uniform during the decennial period, except in 1838, when the admissions were somewhat increased by cholera and febrile disease, and the mortality was nearly doubled by cholera. The amount of sickness in each of the half yearly periods is nearly similar,

but the mortality is somewhat greater in the first half year, occasioned by cholera. The great proportion of the admissions from fever, have been of the intermittent type, as might be supposed from the presence of malaria not only at the various stations, but in the jungles on the hills in their vicinity; the mortality however has not been great, being little more than 1½ per cent, on the attacks. It was observed by several medical officers, that diarrhœa was a frequent complication in this form of fever, and the fatal result in many cases, was attributed more to the affection of the bowels, than to the fever itself. The prevalence of rheumatism may be ascribed also, in a great measure, to the effects of climate;—and the large amount of admissions under the head cutaneous diseases, is partly owing to the same cause, but chiefly to the nature of the diet of the sepoy, on this coast.

In the tables No 11 and 12, for five years, the diseases are classified as in the preceding divisions. The total admissions amongst the European troops, (table No. 11,) amount to 7,093, with 166 deaths, from an aggregate strength of 3575 men; the per centage of sick to strength, being 198·405; of deaths to sick treated 2·340; and of deaths to strength 4·647. Amongst the native troops, (table No. 12.) the total admissions, amount to 11,282, with 260 deaths from an aggregate strength of 15,782; thus giving 71·486 admissions for every 100 men, and 2·304 per cent of deaths, to the sick treated, and 1·647 deaths per cent on the strength.

The tabular statements No. 13, 14, 15 and 16, exhibit much useful information relative to the most important diseases, and to the proportion and per centage of admissions and deaths both amongst the European and native troops.

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No. 18.—*Table exhibiting the sickness and mortality amongst the OFFICERS of H. M.'s regiments at Cannanore, during a period of thirteen years, from* 1829 *to* 1841.

Aggregate strength. 413. CLASSES	DISEASES.	Admitted.	Died.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
Fevers.	Febris int. quotid....	7	0	93	3	22 ·581	3 ·225
	,, remittens.........	13	2				
	,, com. cont........	73	1				
	Cholera......	0	0	0	0	0 ·000	0 ·000
Diseases of the abdominal viscera.	Diarrhœa	44	0	155	6	37 ·530	3 ·870
	Dysenteria...........	29	3				
	Hœmorrhois..........	14	0				
	Enteritis, ...	1	1				
	Obstipatio............	5	0				
	Dyspepsia............	34	0				
	Icterus..	0	0				
	Hepatitis.............	28	2				
Diseases of the lungs.	Catarrhus	51	0	56	1	13 ·559	1 ·785
	Phthisis pulmonali...	2	1				
	Hœmoptysis..........	3	0				
	Asthma...............	0	0				
	Pneumonia...........	0	0				
Diseases of the brain.	Apoplexia............	3	1	10	1	2 ·421	10 ·000
	Paralysis.............	3	0				
	Mania................	3	0				
	Delirium Tremens....	0	0				
	Concussio	1	0				
	Rheumatismus.......	43	0	43	0	10 ·411	0 ·000
Venereal affections.	Syphilis primitiva.....	4	0	31	0	7 ·506	0 ·000
	Gonorrhœa...........	21	0				
	Hernia humoralis....	5	0				
	Strictura urethræ.....	1	0				
	Scorbutus............	1	1	1	1	0 ·242	100 ·000
	Morbi oculorum......	10	0	10	0	2 ·421	0 ·000
	,, cutis..........	10	0	10	0	2 ·421	0 ·000
	Other diseases........	254	0	254	0	61 ·501	0 ·000
	Total....	663	12	663	12	160 ·532	1 ·809

Note—Per centage of deaths to strength, 2·905.

MALABAR AND CANARA.

No. 19.—*Table exhibiting the sickness and mortality amongst the WOMEN of H M.'s regiments at Cannanore, during the same period.*

Aggregate strength. 977. CLASSES.	DISEASES.	Admitted.	Died.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
Fevers	Febris int. quotid....	6	0	174	5	17 ·809	2 ·873
	,, remittens..........	4	1				
	,, com cont...	164	4				
	Cholera	3	3	3	3	0 ·307	100 ·000
Diseases of the Abdominal viscera	Diarrhœa............	21	0	385	14	39 ·406	3 ·636
	Dysenteria....	170	8				
	Colica............	60	0				
	Dyspepsia...........	28	0				
	Hœmorrhois.........	17	0				
	Obstipatio...........	44	0				
	Enteritis.............	1	1				
	Gastritis.............	2	0				
	Hepatitis............	42	5				
Diseases of the Lungs.	Catarrhus...........	24	1	32	2	3 ·275	6 ·250
	Phthisis pulmonalis..	1	0				
	Pneumonia...........	6	1				
	Asthma..............	1	0				
Diseases of the Brain.	Apoplexia.	1	1	3	1	0 ·307	33 ·333
	Paralysis............	1	0				
	Tetanus..............	0	0				
	Hysteria.............	1	0				
Eruptive fevers......	Variola...............	1	1	1	1	0 ·102	100 ·000
	Varicella.............	0	0				
	Rheumatismus........	20	0	20	0	2 ·047	0 ·000
	Anasarca.............	1	0	1	0	0 ·102	0 ·000
	Morbi oculorum......	14	0	14	0	1 ·432	0 ·000
	,, Cutis...........	5	0	5	0	0 ·511	0 ·000
	Other diseases.......	221	3	221	3	22 ·620	1 ·357
	Total....	859	29	859	29	87 ·922	3 ·376

Note—Per centage of deaths to strength, 2·968.

MALABAR AND CANARA.

No. 20.—*Table exhibiting the sickness and mortality amongst the CHILDREN of H. M.'s regiments at Cannanore, during the same period.*

Aggregate strength. 1612. CLASSES.	DISEASES.	Admitted.	Died.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
Fevers..	Febris int. quotid....	2	1	150	9	9 ·305	6 ·000
	,, remittens........	11	1				
	,, com. cont.......	137	7				
	Cholera..............	0	0	0	0	0 ·000	0 ·000
Diseases of the abdominal viscera.	Diarrhœa......... ..	144	17	264	38	16 ·377	14 ·393
	Dyseuteria...........	113	19				
	Marasmus............	3	2				
	Hepatitis.............	4	0				
Diseases of the lungs.	Cynanche............	3	0	40	2	2 ·481	5 ·000
	Catarrhus............	35	1				
	Phthisis pulmonalis..	0	0				
	Pneumonia...........	2	1				
Diseases of the brain.	Convulsio............	7	7	15	15	0 ·930	100 ·000
	Hydrocephalus.......	7	7				
	Epilepsia.............	0	0				
	Paralysis.............	1	1				
EruptiveFevers.	Varicella.............	6	0	23	4	1 ·426	17 ·391
	Variola................	9	4				
	Rubeola...............	8	0				
	Vermes................	15	1	15	1	0 ·930	6 ·666
	Morbi oculorum......	33	0	33	0	2 ·047	0 ·000
	,, cutis...........	40	0	40	0	2 ·481	0 ·000
	Other diseases........	341	14	341	14	21 ·153	4 ·105
	Total....	921	83	921	83	57 ·134	9 0.11

Note—Per centage of deaths to strength, 5·148.

No. 21.—*Table exhibiting the number of Admissions and Deaths, amongst the Native Troops stationed at Calicut, from 1829 to 1841 inclusive.*

CLASSES.	DISEASES.	Aggregate strength 2960. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
Fevers......	Febris ephemera.....	44	2	72	0				
	,, intermit quotid..	73	0	79	0	274	4	9 ·256	1 ·459
	,, remittens.......	1	1	5	1				
	Cholera..............	0	0	6	4	6	4	0 ·202	6 ·666
Diseases of the Abdominal viscera..	Diarrhœa............	12	0	18	1				
	Dysenteria...........	9	0	8	2				
	Obstipatio...........	14	1	20	0	110	4	3 ·716	3 ·636
	Dyspepsia............	9	0	15	0				
	Hœmorrhois..........	3	0	2	0				
Diseases of the Lungs	Catarrhus............	10	0	11	0				
	Asthma..............	0	0	1	0	24	2	0 ·810	8 ·333
	Phthisis pulmonalis..	2	2	0	0				
Diseases of the Brain.	Apoplexia............	1	0	2	1				
	Epilepsia............	1	0	0	0				
	Paralysis............	1	1	0	0	7	2	0 ·236	28 ·571
	Amentia.............	0	0	1	0				
	Mania...............	0	0	1	0				
EruptiveFevers......	Variola..............	1	0	2	0	5	0	0 ·168	0 ·000
	Varicella............	0	0	2	0				
Dropsics....	Anasarca.............	1	0	3	1	5	1	0 ·168	20 ·000
	Ascitis..............	1	0	0	0				
	Rheumatismus........	57	2	69	2	126	4	4 ·256	3 ·174
Venereal affections ..	Syphilis primitiva....	19	0	37	0				
	Gonorrhœa...........	3	0	8	0	77	0	2 ·601	0 ·000
	Hernia humoralis....	4	0	6	0				
Specific diseases.....	Atrophia.............	2	1	2	1	10	2	0 ·337	20 ·000
	Scrophula............	0	0	6	0				
	Morbi oculorum......	7	0	10	0	17	0	0 ·574	0 ·000
	,, Cutis..........	60	0	99	0	159	0	5 ·371	0 ·000
	Other diseases........	287	1	309	0	*596	1	20 ·135	0 ·167
	Total....	622	11	794	13	1416	24	47 ·837	1 ·694

Per centage of deaths to strength 0·810.

* Of this number 183 were cases of ulcus, and 180 phlogosis.

No. 22.—*Table exhibiting the Number of Admissions and Deaths, amongst the Native Troops stationed at Mangalore from* 1832 *to* 1841 *inclusive.*

CLASSES.	DISEASES.	Aggregate strength 11079. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
Fevers.....	Febris ephemera......	186	2	274	2	1210	27	10 ·921	2 ·231
	,, intermit quotid..	238	3	335	9				
	,, remittens........	11	2	25	1				
	,, com. continua..	62	3	79	5				
	Cholera..............	7	2	8	1	15	3	0 ·135	20 ·000
Diseases of the abdominal viscera......	Diarrhœa............	158	5	215	18	838	52	7 ·563	6 ·205
	Dysenteria...........	75	4	120	14				
	Obstipatio...........	20	1	35	0				
	Dyspepsia............	69	4	104	2				
	Hœmorrhois..........	6	0	13	0				
	Hepatitis.............	5	0	18	4				
Diseases of the Lungs.	Catarrhus.............	23	8	49	3	154	21	1 ·390	13 ·636
	Asthma...............	21	1	11	0				
	Phthisis pulmonalis..	4	1	8	2				
	Pneumonia...........	11	2	14	4				
	Dyspnœa.............	5	0	8	0				
Diseases of the Brain.	Epilepsia.............	3	0	3	0	50	6	0 ·451	12 ·000
	Paralysis.............	5	1	13	1				
	Amentia..............	2	0	5	0				
	Mania................	4	0	6	1				
	Tetanus..............	1	1	0	0				
	Delirium Tremens....	1	1	7	1				
Eruptive fevers......	Variola...............	11	1	4	0	59	1	0 ·532	1 ·699
	Varicella.............	7	0	9	0				
	Rubeola..............	0	0	24	0				
	Erysipelas............	2	0	2	0				
Dropsies...	Anasarca.............	13	3	18	2	36	8	0 ·324	22 ·222
	Ascites...............	3	2	2	1				
	Rheumatismus........	376	2	450	5	826	7	7 ·455	0 ·847
Venereal affections...	Syphilis primitiva....	191	0	158	1	506	2	4 ·567	0 ·395
	,, consecutiva.....	23	0	16	0				
	Gonorrhœa...........	33	0	28	0				
	Hernia humoralis....	26	0	25	0				
	Strictura urethræ.....	3	0	3	1				
Specific diseases.....	Atrophia.............	26	6	21	7	115	13	1 ·038	11 ·304
	Dracunculus..........	8	0	10	0				
	Lepra................	4	0	9	0				
	Scorbutus............	1	0	2	0				
	Scrophula............	18	0	16	0				
	Morbi oculorum.......	39	0	48	0	87	0	0 ·785	0 ·000
	,, Cutis...........	361	0	710	0	1071	0	9 ·669	0 ·000
	Other diseases........	1258	4	1650	7	*2908	11	26 ·247	0 ·378
	Total....	3320	59	4555	92	7875	151	71 ·080	1 ·917

NOTE.—Per centage of deaths to strength 1·362.

* Of this number were Phlogosis 654.—Ulcus 221.

MALABAR AND CANARA.

Table shewing the number of Persons successfully vaccinated from 1829 *to* 1838 *inclusive.*

DISTRICT OF STATIONS.	Class and sex of Patients.						Total vaccinated.		REMARKS.
	Christians.		Hindoos.		Mahomedans.				
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
Mangalore,................	2115	1759	18,414	10,866	2,681	1,458	23,210	14,083	
Onore......................	902	721	19,828	16,691	607	500	21,337	17,912	
Cannanore.................	1085	677	6,671	3,728	1,301	548	9,057	4,953	
Tellicherry.................	717	682	18,427	11,088	4,857	3,126	24,001	14,896	
Calicut......................	540	459	18,619	11,756	7,624	3,475	26,783	15,690	
Angadiporam.............	384	173	12,281	5,745	7,769	3,413	20,434	9,331	
Cochin*......	1667	1384	2,416	2,016	,372	337	4,455	3,737	
Travancore*.........	1091	1085	3,729	3,148	,649	420	5 ,469	4,653	
Grand Total....	8501	6940	1,00,385	65,038	25,860	13,277	1,34,746	85,255	*up to 1832.

Number of Vaccinators in each District.

	1st Class Vaccinators.	2d Class Vaccinators.
Mangalore.........................	1	3
Onore..............................	1	3
Cannanore........................	1	3
Tellicherry........................	2	5
Calicut............	1	3
Angadiporam	1	2
Cochin.............................	1	3
Travancore.......................	1	3
Total.	9	25

The number vaccinated in this Division during these ten years is 2,20,001; the whole expense incurred amounts to Rupees 60000 which gives an average of somewhat more than 27 11 Rupees per hundred, or 6¼ pence per head in English money.

Statement shewing the extent of accommodation, Dietary, Allowances for Clothing, Hours of Labour, &c. in the several Jails throughout the Provinces of Malabar and Canara.

JAIL OF	Number of prisoners the prison is capable of containing in separate sleeping cells.	Number of prisoners the prison is capable of containing where more than one prisoner sleeps in one cell.	Dietary or other weekly allowance and weekly cost per head.	Allowance of clothing and bedding, and cost per head.	Discription of employment and hard labour.	Hours of labour and of exercise.
CANNANORE.	There are no separate cells for each convict to sleep in.	There are 4 wards or cells, one of which is capable of holding 100 and each of the other 70 prisoners.	Dietary—60 Rs. weight of rice & 6 reas of other articles, such as firewood, chilleys, &c. each per diem. Weekly cost per head.............. 0 5 3	One cloth every 6 months. Average price 0 8 0 One mat...... 0 0 11 One cumbly annually.... 1 0 0 Lamp oil per month....... 0 1 $3\frac{60}{105}$ Rs... 1 10 $2\frac{60}{105}$	Repairing roads in the cantonment.	From 6 to 12 A. M. and again from 2 to 5 P. M.
TELLICHERRY.	The prison is not constructed with separate cells, but is thus divided—1 ward capable of containing 100 and 12 cells capable of containing 200 prisoners.	About 300.	Five Annas and 7 pice, or 1¼ lb. of rice, and six reas daily.	One piece of cloth, or moondoo, every six months, and a mat and cumbly every 12 months or as required, 9 Annas and 8 pice per head, for half year.	Repairing public roads, cutting stones, and making baskots.	Go out at 6 o'clock in the morning and return at 12 o'clock, go again to work at 2 P. M. and return to jail at 5 P. M.
CALICUT.	For separate sleeping cells, the prison would require to be entirely remodelled, the present one having 12 wards of different sizes, with 13 solitary cells attached and 2 small wards for debtors, and 1 female ward in separate building, so that only 28 prisoners could be so accommodated.	The prison has six large wards for 50 prisoners each—4 small wards for 35 each, & 2 small wards for 20 each. Besides 13 solitary cells, 2 debtors, and 1 female ward—Total 600.	Rice, fish, vegetables, curry stuff and ¼ olluck of cocoanut oil. Total weekly cost per head 15¾ Calicut pice, about 5 Annas.	Two cloths and 1 cumbly annually and mats when required, cost per head 42¾ Calicut pice, about 13 Annas and 5 pice, the mats being made in the jail.	Cutting and carrying stones, repairing roads and bridges, working as carpenters and smiths, sawing timber, bringing Cardera leaves for mats, creepers for baskets, &c. &c. cooking, and cleaning the jail.	From 6½ A. M. to 4½ P. M. from which half an hour is deducted for breakfast and one hour as the time occupied in going, and returning from work, leaving 8½ hours for labour.
MANGALORE.	The jail is divided into or composed of 20 yards, equal to the accommodation of 500 men, the largest will accommodate 60, and the smallest about 10.	There are no solitary cells smaller than 12 feet by 16.	Rs. A. P. 0 9 6¼	Rs. A. P. 0 4 7¼	Constructing and repairing roads, cutting stones & repairing public buildings, and weaving cloths, &c.	The prisoners leave the jail at 7 o'clock, and work till 12, when they rest for ¼ an hour—they leave work at ½ past 4, when they return to the jail.

APPENDIX.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN JULY, 1840.

Days.	Barometer inches. Sunrise.	Barometer inches. 12 to 2 P. M.	Barometer inches. Sunset.	Thermometer degrees. Sunrise.	Thermometer degrees. 12 to 2 P. M.	Thermometer degrees. Sunset.	Pluviometer inches, from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	29·95	29·90	29·90	84½	89½	88½	—	Calm.	Sy.	Cloudy
2	—·95	—·92	—·90	82½	90	87½	—	,,	,,	do.
3	—·98	—·94	—·94	85	88½	88	—	,,	S. Ey.	do. night clear,
4	—·98	—·96	—·94	86	88	87½	—	Sy.	,,	do. do. light shower, A. M.
5	—·97	—·96	—	85	88	—	—	Calm.	,,	do. do. do. P. M.
6	—·94	—·91	—·90	83½	86	85	0·1	,,	S. Wy.	do. showers, A. and P. M.
7	—·89	—·92	—·87	82	85	85	0·3	Wy.	,,	do.
8	—·90	—·92	—·87	82	85	85	—	,,	,,	do. drops of rain.
9	—·93	—·94	—·93	82½	89	87	—	N. Wy.	N. Wy.	do. hazy do.
10	—·96	—·95	—	83	89	—	—	,,	,,	do. high wind do.
11	—·95	—·89	—·89	82½	89	88	—	,,	Wy.	do. do. do.
12	—·86	—·80	—·79	82	90	90	—	Wy.	,,	do. do. squalls 9 P. M.
13	—·89	—·85	—·85	85	93	92	—	,,	S. Wy.	do. drops of rain,
14	—·93	—·93	—·91	85	93	88½	—	Sy.	Sy.	do. shower, P. M.
15	—·97	—·91	—·87	84	94	88	0·2½	,,	,,	do. heavy rain in night with lightning and thunder.
16	—·92	—·87	—·86	83	90	87	1·15	Calm.	,,	do. shower, P. M.
17	—·91	—·89	—·85	82	90	88½	0·2	,,	,,	do.
18	—·91	—·87	—·80	82	91	91	—	Wy.	S. Wy.	do. shower, P. M. with lightning and thunder.
19	—·88	—·85	—	83	89	—	0·11	,,	,,	do. do. A. M.
20	—·85	—·83	—·83	80	87	82	0·½	,,	,,	do. heavy rain 3 P. M. with lightning and thunder.
21	—·88	—·85	—·81	79	86	84	1·19½	,,	,,	do.
22	—·92	—·87	—·85	78	87	87	—	Calm,	,,	do.
23	—·91	—·90	—	81	90	—	—	Wy.	,,	do.
24	—·91	—·87	—·82	81	91	90	—	,,	,,	do. shower, P. M.
25	—·90	—·90	—	82	90	—	0·1	,,	,,	do. high wind
26	—·90	—·93	—	82	92	—	—	,,	,,	do.
27	—·97	—·95	—·92	83	91	91	—	Calm.	,,	do.
28	—·96	—·92	—·88	84	92½	88	—	Wy.	Sy.	do. night clear.
29	—·92	—·90	—·87	83	92	87	—	Calm,	,,	do. drops of rain.
30	—·92	—·91	—·86	84	92	87½	—	Sy.	S. Wy.	do. do.
31	—·92	—·92	—	82	92	—	—	,,	,,	do.

In. 20ths.
Amount of rain...... 4 15½
Number of days on which rain has fallen during the month ... 17
Prevailing winds. { A. M. Wy. / P. M. S. Wy.

Thermometer.
Mean maximum.....89
Mean minimum.....82
General mean.......86
Mean daily range... 6

Barometer.
Mean maximum......29·92
Mean minimum......29·87
General mean.......29·90
N. B.—20 feet from level of the ground.

The above observations were kept at the Superintending Surgeon's Office.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN AUGUST, 1840.

Days.	Barometer inches. Sunrise.	Barometer inches. 12 to 2 P. M.	Barometer inches. Sunset.	Thermometer degrees. Sunrise.	Thermometer degrees. 12 to 2 P. M.	Thermometer degrees. Sunset.	Pluviometer inches, from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	29·97	29·95	29·88	85	91	86	——	Wly. S.	S. W.	Clear the early part of the day; sea breeze from 5½ till 7½ P.M. heavy cl uds, rain, thunder and lightning in the evening.
2	—·95	—·94	—·85	83½	88½	86½	0·15	Wly. S.	S. W.	Partial clouds, sea breeze from 4 to 7 P. M. heavy clouds, rain, thunder & lightning.
3	—·92¼	—·93	—·87¼	84	88	87	0·2	W.	S. W.	Cloudy, sea breeze from 5 to 7 P. M. heavy clouds, squalls and rain.
4	—·92¼	—·92½	—·84	83	86	85½	0·1	W.	S. W.	Haze, sea breeze set in 4 P. M.
5	—·91	—·88	—·85	83½	91	88	——	W.	S. W.	do. do. do. 5 P. M. a few drops of rain at 4 P. M.
6	—·92½	—·89	—·85	84	91	90½	——	W.	S. W.	do. do. do. 5 P. M. rain at 5 P. M. and lightning
7	—·90	—·86	—·82½	85½	91½	91	0·2	W.	S. W.	Cloudy with rain A. M. sea breeze set in at 9 P. M. heavy clouds and squalls with rain at 7 P. M.
8	—·90	—·90	—·80	86	91	89	0·1½	W.	S. W.	Cloudy, sea breeze set in at 5¼ P. M.
9	—·89	—·97	—·80	84½	92	87	——	W.	S. W.	Haze do. 2 P. M.
10	—·82	—·97	—·82	84¼	89	87	——	S.	S. E.	Clear do. 1 P. M.
11	—·94	—·97	—·90	86	91	87	——	S.	S. E.	Haze do. 1 P. M.
12	—·92	—·97	—·92	86	87	86	——	S.	E.	Clear do. 11 A. M.
13	—·97	—·96	—·90	84	87	86½	——	S.	E.	do. do. 11½ A. M.
14	—·98	—·93	—·90	84	91	86	——	S.	E.	do. do. 12 A. M.
15	—·93	—·96	—·90	86	90	87	——	S.	E.	do. sea breeze 12 A. M. heavy black clouds and lightning in the evening.
16	—·97	—·96	—·95	85	85	86½	0·1½	S.	E.	Haze, sea breeze 12 A. M. rain 4 A. M.
17	30·—	—·94	—·88	85	87	86½	——	S.	E.	do. do. 2 P. M.
18	29·98	—·87½	—·85	85	85	86	——	S.	S. W.	Heavy clouds and lightning A. M. sea breeze set in at 3 P. M.
19	—·94	—·94¼	—·90	84	84½	86	——	S. W.	E.	Haze, sea breeze set in at 2 P. M.
20	—·98	—·92	—·90	83	90¼	86	——	S. W.	E.	do. do. 11 A. M.
21	—·95	—·94	—·88	85	86	86	——	S.	E.	Clear do. 1 P. M.
22	—·96	—·91	—·90	84½	85	82½	——	S. W.	S. E.	do. sea breeze 12¼ A. M. heavy black clouds and lightning with a few drops of rain in the evening.
23	30·—	—·96	—·90	82	87	86	——	S. W.	S. E.	Cloudy, a few drops of rain, sea breeze at 12 A. M.
24	29·97	—·96	—·89	83	86	86	——	S. W.	E.	Haze, A. M. sea breeze 12 A. M. black clouds, heavy rain and lightning.
25	30·	—·95	—·90	82	90	85½	0·7¼	S. W.	S. E.	Cloudy sea breeze set in 1 P. M.
26	29·97	—·95	—·86	84	86	86	——	S.	E.	do. do. 2 P. M.
27	29·93	—·91	—·83	83	86	85¼	——	S.	S. E.	Clear A. M. do. 2 P. M. heavy clouds and lightning in the evening.
28	30·—	—·93	—·89	83	87	85	2·11	S. W.	S. E.	Strong wind, lightning and thunder with heavy rain from 3¼ to 8¼ A.M. sea beeze 10 A. M.
29	29·99	—·94	—·87	82	86	82	2·10	S. W.	S. E.	do. do. lightning and thunder with heavy rain at 2 A. M. sea breeze 10¼ A. M.
30	—·99	—·90	—·85	84	85	85	——	S. W.	S. E.	Haze, heavy dew, sea breeze 9 A. M.
31	—·88	—·90	—·86	82¼	85	85	——	S. W.	S. E.	do. do. do. 9¼ A. M.

Barometer.	Thermometer.	
Mean maximum......29·91	Mean maximum......87°	Amount of rain...... In. 20ths 6 11½
Mean minimum ......29·87	Mean minimum......81°	Number of days on which rain has fallen during the month.......... 13
General mean ......29·91	General mean......86°	Prevailing winds.. A. M. S. S.W. W. P. M. S. E. S.W.
Height from ground floor of Dispensary 2 feet 7¾ Inches.	Mean daily range...... 4°	

The above observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN SEPTEMBER, 1840.

Days.	Barometer inches. Sunrise.	12 to 2 P. M.	Sunset.	Thermometer degrees. Sunrise.	12 to 2 P. M.	Sunset.	Pluviometer inches from noon to noon.	Wind. A. M.	P. M.	WEATHER.
1	29·91	29·85	29·85	81½	85	85	1·2	S. W.	S.	Haze, A. M. heavy rain and lightning during last night, calm P. M.
2	—·86	—·90	—·85	82	85	85	0·11	W.	S.	Cloudy A. M. heavy rain and lightning during last night, calm P. M.
3	—·88	—·90	—·86	82½	83	84	0·1	W.	S.	Clondy A. M. light rain and lightning during last night. sea breeze set in at 7½ P. M.
4	—·95	—·95	—·88	82	84½	85	,,	W.	S.	Cloudy and drizzly A. M. sea breeze set in at 7 P. M.
5	30·—	—·98	—·92	81½	86	86½	0·1	W.	S.	Cloudy A. M. light rain during last night, sea breeze set in at 7½ P. M.
6	——	—·98	—·94	82	87	87	0·5½	S. W.	E.	Cloudy A. M. rain from 7 to 8 P. M. sea breeze set in at 3 P. M.
7	29·96	—·96	—·94	83	88	87	0·4½	S. W.	E.	Haze A. M. sea breeze set in at 4½ P. M.
8	—·98	—·96	—·88	83	88½	87	,,	W.	E.	Clear A. M. drizzly 4 P. M. sea breeze set in at 4 P. M.
9	—·97	—·95	—·88	83½	85	85½	,,	W.	S.	Cloudy A. M. drizzly 6 A. M. calm P. M.
10	—·95	—·91	—·87	83	84	84	,,	W.	S.	do. light rain A. M. do.
11	—·95	—·90	—·87	81	85	83	0·2½	W.	S.	do. do. do.
12	—·96	—·90	—·85	82½	88	85	,,	W.	S.	do. do. do. sea breeze set in at 5 P. M.
13	30·01	—·98	—·90	82½	85	85	0·1	W.	E.	do. do. do. cool in the day do.
14	29·97	—·96	—·85	82	88	85	,,	W.	E.	Clear A. M. strong winds, sea breeze set in at 3 P. M.
15	—·95	—·95	—·90	81	86	85	1·16	W.	E.	Cloudy, heavy rain and lightning from 1 to 6 A. M. sea breeze set in at 1 P. M.
16	—·98	—·96	—·90	82½	84½	84	1·1	W.	S. E.	Cloudy, heavy rain and lightning from 1 to 5 A. M. sea breeze set in at 3 P. M.
17	—·95	—·96	—·90	82½	85	85	,,	W.	S. W.	Haze A. M. light rain from 4½ to 6 P. M.
18	—·97½	—·97	—·94	82½	82½	85	0·2	W.	N. E.	Clear A. M. drizzly during the day, calm P. M.
19	—·98	—·97	—·90	84	86½	85½	,,	S. W.	S. W.	do. heavy dew do.
20	30·02½	—·97	—·91	80½	84	85	0·3½	W.	S. W.	Cloudy, light rain from 3 to 7 A. M. do.
21	29·98	—·97	—·90	83	88	83½	,,	W.	S. W.	Haze, heavy dew, sea breeze set in at 1 P. M. cloudy P. M.
22	—·99	—·90	—·88	80½	86½	85½	0·8½	W.	E.	do. rain during last night, sea breeze at 2 P. M.
23	—·93	—·92	—·88	85	85	86	,,	W.	N. E.	Clear A. M. cool in the day do. 3 P. M.
24	—·96	—·93	—·89	84	88	85½	,,	S. W.	N. E.	do. do. do. 3. P. M.
25	—·94	—·96	—·87	84	87	86	,,	W.	S. W.	do. sultry calm P. M.
26	—·93	—·94	—·88	83	87	86½	,,	W.	N. E.	do. do. do.
27	—·94	—·90	—·88	84	88	86½	,,	N. W.	N. E.	do. do. do.
28	—·93	—·94	—·88	84½	88½	86½	,,	N. W.	N. E.	do. do. do.
29	—·90	—·97	—·87	85	89½	86	,,	W. by S.	N. E. S. E.	do. do. rain from 6½ to 7½ P. M. calm P. M.
30	—·93	—·91	—·86½	84	89	86½	0·2	W. by S.	N. E. S. E.	do. do. light rain from 4½ P. M. do.

Amount of rain...... In. 20ths. 6 1½
Number of days on which rain has fallen during the month } 20
Prevailing winds. { A. M. Westerly P. M. SE. SW. & NE.

Thermometer.
Mean maximum..86°
Mean minimum...12°
General mean.....84°8
Mean daily range.. 3°6

Barometer.
Mean maximum....29·95
Mean minimum.....29·88
General mean......29·92½
Height from ground floor of Dispensary 2 feet 7¾ inches.

The above Observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN OCTOBER 1840.

Days.	Barometer inches. Sunrise.	Barometer inches. 12 to 2 P. M.	Barometer inches. Sunset.	Thermometer degrees. Sunrise.	Thermometer degrees. 12 to 2 P. M.	Thermometer degrees. Sunset.	Pluviometer inches from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	29·94	29·90	29·85	84	90	88	——	W.	N. E.	Clear A. M. sultry at noon—calm P. M.
2	—·90	—·88	—·85	85	88	88	——	W.	N. E.	do. do. do. and sultry.
3	—·91	—·90	—·90	86	87	87	0· 3½	W.	N.	do. rain at 10½ A. M. sea breeze set in at 11 A. M.
4	—·94	—·94	—·90	85	86	86½	0· 10	N.	N. E.	Haze, heavy rain at 11 A. M. calm P. M.
5	30·02½	30·04	—·94	83	86	85	0· 5½	W.	N. E.	Heavy black clouds N. rain with thunder 10 A. M., sea breeze at 2 P. M.
6	—·05	—·03	—·94	85	87	86	——	W.	N. E.	Heavy dew, clear A. M. cool at noon, sea breeze at 1 P. M.
7	—·05	—·00	—·94	85	87	86	——	W.	S. E.	do. do. do. do. sultry at night.
8	—·03	—·00	—·94	85	87½	86	——	W.	S. E.	do. do. do. do. do.
9	29·99	29·95	—·94	83½	86	86	——	W.	S. E.	Partial dew do. sea breeze at 1 P. M. do.
10	—·98	—·95	—·90	84	86	86½	——	W.	S. E.	do. do. do. 12 P. M. do.
11	30·00	30·00	—·98	85	87	86	——	N. W.	N. E.	do. do. do. 10 A. M. cool at night.
12	—·00	—·05	—·97	83	88	86½	——	N. W.	N. E.	do. do. do. 10 A. M. sultry P. M.
13	—·03	29·98	—·94	85	85	86½	——	N. W.	N. E.	Drizzly 6 A. M. do. 10 A. M. do.
14	—·00	—·97	—·94	82½	85	86	——	N. W.	N. E.	do. and lightning A. M. calm P. M.
15	—·03	30.00	—·95	83	87	87	——	N. W.	N. E.	Partial dew, clear A. M. cool at noon.
16	—·05	—·03	30·00	84½	87½	86	——	W. byS.	E.	Drizzly A. M. do.
17	—·08	—·07	—·01	85	87½	86	——	W. byS.	S. E.	Partial dew, clear A. M. sea breeze 1 P. M.
18	—·09	—·05	—·00	83	87	86	——	W. byS.	S. E.	do. do. do. 2 P. M.
19	—·07	—·09	—·05	82	87½	86½	——	W.	S. E.	do. do. Cloudy P. M.
20	—·12	—·15	—·05	81½	87	86	——	W.	N. E.	Heavy dew do. do.
21	—·15	—·13	—·07	80	87	86	——	W.	N. by E.	Partial dew do. calm P. M.
22	—·10	—·10	—·04	79	87	85½	——	N. E.	N. by E.	Clear A. M. light winds do.
23	—·10	—·07	—·04	79	86½	83½	——	N.	N. by E.	Drizzly, partial clouds A. M. strong winds, cool P. M.
24	—·10	—·10	—·04	78	86	85	——	N.	N. by E.	Cloudy A. M. strong winds, calm P. M.
25	—·07	—·10	—·04	79	87	85	——	N.	N. by E.	Raining A. M. strong winds, heavy rain with lightning P. M.
26	—·10	—·05	—·02	79½	9½	79½	1—.	N. E.	N. by E.	do. sea breeze 6 P. M. do. do.
27	—·08	—·04	—·04	79½	82	80	2· 11	N. E.	N. E.	Cloudy A. M. heavy rain with lightning 3. P. M.
28	—·08	—·09	—·03	78½	81½	82	0· 12	N. E.	E.	Raining A. M. with thunder and lightning, sea breeze 4 P. M., heavy rain P. M.
29	—·08	—·07	—·06	81½	83	82½	2—.	N. E.	E.	Raining A. M. strong winds, sea breeze 4 P. M.
30	—·08	—·05	—·03	81½	85	83	9	N. E.	N. E.	do. A. M. sultry at noon do. 6 P. M.
31	—·09	—·05	—·02½	81	85	83½	——	N. E.	N.E.ybE.	Clear A. M. partial dew do. 5 P. M.

The above Observations were kept at the Fort Dispensary.

Barometer.	Thermometer.	
Inches. Mean maximum.....30·04	Mean maximum.....86°90	Amount of rain........ In. 20ths, 7 11
Mean minimum......29·98	Mean minimum......82°46	Number of days on which rain has fallen during the month. 13
General mean........30·01	General mean........84°60	Prevailing winds. A.M. W. N. E. N. W.N.W. byS.
Height from ground floor of Dispensary 2 feet 7¾ inches.	Mean daily range... 3°85	P.M. N.E.S.E.E. N.

REGISTER OF METEOROLOGICA . OBSERVATIONS, MADE AT MADRAS IN NOVEMBER, 1840.

Days.	Barometer inches. Sunrise.	Barometer inches. 12 to 2 P. M.	Barometer inches. Sunset.	Thermometer degrees. Sunrise.	Thermometer degrees. 12 to 2 P. M.	Thermometer degrees. Sunset.	Pluviometer inches, from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	30·10	30·10	30·02½	78½	84½	83½	——	N. E.	N. E.	Heavy dew, clear A. M. cool at noon sea breeze set in at 6 P. M.
2	—·10	—·10	—·03	77	84	83½	——	N. E.	N. E.	do. do. do. at 5½ P. M.
3	—·05	—·05	—·03	75	85	84	——	N. E.	N. by E.	Partial dew do. do. at 6 P. M.
4	—·05	—·05	—·03	82½	85	83½	——	N. by E.	N. E.	Partial dew, drizzly 8 A. M., heavy rain at 3 P. M. with thunder and lightning.
5	—·12	—·10	—·05	80½	81½	80¼	3·7	N.	N. E.	Raining A. M., cloudy P. M., heavy rain during night.
6	—·13	—·10	—·04	77½	80½	80	1·7	N. N. E.	N. by E.	do. do. do.
7	—·04	—·02	29·96	81½	81½	80½	·10	N. N. E.	N. by E.	Cloudy rain at 8 A. M. and continued throughout the night with thunder and lightning.
8	—·05	—·03	—·95	79	78½	80	3·10	N. N. E.	N. by E.	Raining A. M. continued throughout the night.
9	—·00	—·00	—·95	78	78	77	·15	N. N.W.	N. by E.	do. do. do. strong winds.
10	29·95	—·00	—·97	76½	75½	77	3·10	N. N.W.	N. E.	do. do. do.
11	—·94	29·93	—·93	77½	77	77	2·16	N. by W.	N. E.	do. do. do.
12	—·94	—·90	—·84	79	79½	79½	1·15	N.	N. E.	do. do. do. strong winds P. M.
13	—·88	—·85	—·83	73½	74½	73	2· 4	N.	N.	do. do. do. do.
14	—·89	—·89	—·87½	74	73¼	77	1·11	N. by W.	N.	do. A. M. cloudy P. M.
15	—·94	30·00	—·94	72½	77	72	——	N.	N. by E.	Haze A. M. clear P. M.
16	30·00	—·00	—·98	71½	79	77½	——	N.	N. by W.	Partial dew, clear A. M. do.
17	—·01	—·00	30·00	71½	79½	78	——	N.	N. E.	Heavy dew do. do.
18	—·07	—·05	—·00	74	79	78½	——	N.	N. E.	do. do. do.
19	—·10	—·06	—·00	72	79½	78	——	N. E.	N. E.	do. do. do.
20	—·10	—·05	—·00	72	79½	78½	——	N. E.	N. E.	Heavy dew, clear A. M., cold winds, partial clouds P. M.
21	—·10	—·08	—·04	75	81	78	——	N. E.	N. E.	Partial dew do. do.
22	—·20	—·20	—·10	74	80½	78	——	N. E.	N. E.	do. do. do.
23	—·22	—·20	—·10	75	81	79	——	N. E.	N. E.	Heavy dew do. partial clouds P. M.
24	—·15	—·13	—.09	75	80½	79½	——	N. E.	N. E.	Partial dew do. cloudy P. M. and lightning.
25	—·10	—·10	—·08	75	81	80½	——	N. E.	N. E.	do. cloudy A. M. do. do.
26	—·15	—·14	—·10	79	83	81	——	N. E.	N. E.	do. do. do. do.
27	—·21	—·20	—·15	76	80	80	·9	N. E.	N. E.	Rain at 2 A. M. do.
28	—·20	—·18	—·15	80	81½	80	——	N. E.	N. E.	Cloudy and drizzly A. M. do.
29	—·18	—·15	—·12	75	81½	81	——	N. E.	N. E.	Heavy dew, cloudy A. M. partial clouds P. M.
30	—·10	—·16	—·11	79	82	80½	——	N. E.	N. E.	do. haze A. M. do.

Barometer.	Thermometer.	
Mean maximum......30.06	Mean maximum....80°·13	Amount of rain.....In. 20ths. 21 14
Mean minimum......30.01	Mean minimum.....76 ·20	Number of days on which rain has fallen during the month 13
General mean.......30.04	General mean......78 ·51	Prevailing winds. A. M. N. N. Ey. N. N. Wy. P. M. N. N. Ey. N. N. Wy.
Height from ground floor of Dispensary 2 feet 7¾ inches.	Mean daily range... 4 ·31	

The above observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN DECEMBER, 1840.

Days.	Barometer inches. Sunrise.	Barometer inches. 12 to 2 P. M.	Barometer inches. Sunset.	Thermometer degrees. Sunrise.	Thermometer degrees. 12 to 2 P. M.	Thermometer degrees. Sunset.	Pluviometer inches, from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	30·12	30·15	30·12	81	80	80½	—	N. E.	N. E.	Partial dew, clear A. M. Partial clouds P. M.
2	—·20	—·20	—·15	76½	83	81	—	N. E.	N. E.	do. do. do. do.
3	—·15	—·13	—·08	75½	82½	80½	—	N. E.	N. E.	Heavy dew do. do. do.
4	—·07	—·15	—·10	75	81	80	—	N. E.	E. S. E.	do. do. clear P. M.
5	—·15	—·12	—·09	65	79½	80½	—	N. E.	N. E.	do. do. do.
6	—·18	—·15	—·15	76	81½	80½	—	N. E.	N. E.	do. do. do. strong winds.
7	—·19	—·17	—·12	79	81½	80½	—	N. N. E.	N. E.	Clear A. M. cloudy P. M. strong winds.
8	—·15	—·15	—·12	80	80½	80½	—	N. E.	N. E.	Cloudy A. M. strong winds, drizzly 7 A. M. cloudy P. M. strong wind.
9	—·20	—·20	—·14	80½	82	81	—	N. E.	N. E.	do. do. cloudy P. M.
10	—·22	—·22	—·15	79	82	81	—	N. E.	N. E.	do. clear P. M.
11	—·22	—·22	—·15	75	81	80	—	N. E.	N. E.	Heavy dew, cloudy A. M. clear P. M.
12	—·17	—·17	—·15	76	81½	80½	—	N. E.	N. E.	do. do. do.
13	—·17	—·17	—·11	74	81	80	—	N. E.	N. E.	do. do. do.
14	—·17	—·17	—·11	79	81	80	—	N. E.	N. E.	Haze A. M. clear P. M.
15	—·14	—·16	—·11	79	82	80¼	—	N. E.	N. E.	do. do.
16	—·14	—·16	—·06	78½	82	80	—	N. E.	N. E.	Heavy dew, clear A. M. clear P. M.
17	—·15	—·13	—·07	74	80½	79½	—	N.	N. E.	do. do. do.
18	—·09	—·09	—·05	74½	80½	79	—	N. E.	N. E.	do. do. do.
19	—·13	—·15	—·09	75	81½	79	—	N. E.	N. E.	do. do. do.
20	—·15	—·15	—·09	74	81	79	—	N. E.	N. E.	do, do. do.
21	—·15	—·15	—·11	77	81½	79½	—	N. E.	N. E.	do. do. do.
22	—·15	—·15	—·10	77½	81½	78½	—	N. E.	N. E.	Clear A. M. cloudy P. M.
23	—·14	—·15	—·15	78	81	80¼	—	E. S. E.	E. N. E.	Cloudy A. M. a few drops of rain with strong winds, cloudy P. M.
24	—·20	—·15	—·15	76	82	81½	—	N. E.	N. E.	do. do. do.
25	—·20	—·20	—·15	79	83	82½	—	N. E.	N. E.	Partial dew. clear A. M. clear P. M.
26	—·15	—·15	—·15	75½	82	81	—	N. E.	N. E.	Heavy dew do. do.
27	—·20	—·20	—·15	79	82	80½	—	N. E.	N. E.	Partial dew do. do.
28	—·15	—·15	—·09	74	81	79½	—	N. E.	E. N. E.	Heavy dew do. do.
29	—·13	—·15	—·09	74	80¼	79½	—	E. N. E.	E. N. E.	do. do. do.
30	—·11	—·11	—·09	74	78	79	—	E. S. E.	E. N. E.	do. do. do.
31	—·14	—·14	—·09	73	80¼	79	—	E. S. E.	E. N. E.	do. do. do.

In. 20ths.
Amount of rain.... a few drops on the 23d & 24th.
Number of days on which rain has fallen during the month.
Prevailing winds.. A. M. N. Ey. P. M. N. Ey.

Thermometer.
Mean maximum...81° 23
Mean minimum....76 56
General mean.....79 31
Mean daily range... 4 89

Barometer. inch.
Mean maximum......30 15
Mean minimum......30 11
General mean......30 14
Height from ground floor of the Dispensary 2 feet 7¾ inches.

The above observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN JANUARY, 1841.

Days.	Barometer inches. Sunrise.	Barometer inches. 12 to 2 P. M.	Barometer inches. Sunset.	Thermometer degrees. Sunrise.	Thermometer degrees. 12 to 2 P. M.	Thermometer degrees. Sunset.	Pluviometer inches from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	30·13	30·13	30·05	72½	81	81	——	S. S. E.	E. S. E.	Heavy dew, clear A. M. clear P. M.
2	—·17	—·17	—·08	76	80½	79½	——	S. E.	,,	do. do. do.
3	—·13	—·13	—·09	75	80½	79	——	,,	,,	do. do. do.
4	—·17	—·17	—·09	74	81	80	——	N. E.	,,	do. do. do.
5	—·17	—·19	—·11	79	82½	81	——	,,	,,	Cloudy a few drops of rain at 7 A. M. do.
6	—·20	—·20	—·13	80	80	80½	——	,,	E. N. E.	Haze A. M. clear P. M.
7	—·15	—·20	—·13	75½	76½	80	.—-6½	N.N.E.	,,	Cloudy rain at 7 A. M. and cold at interval during the day and night.
8	—·17	—·20	—·15	79	81	80	·---19½	N. E.	N. E.	Cloudy A. M. clear P. M.
9	—·15	—·20	—·14	73	80½	79	——	,,	,,	Heavy dew, haze A. M. clear P. M.
10	—·21	—·21	—·13	79½	81½	80	——	,,	,,	Partial dew, do. do.
11	—·21	—·18	—·10	79½	82	80½	——	N.N.E.	,,	do. do. do.
12	—·13	—·18	—·10	74	81	80	——	,,	,,	Heavy dew, do. do.
13	—·15	—·15	—·07	74	81½	80	——	,,	,,	do. do. do.
14	—·12	—·13	—·05	76	79	80	.---7	,,	,,	Cloudy rain at 7 A. M. and 1 P. M. cloudy P. M.
15	—·12	—·12	—·08	76	82	80½	·---1½	,,	,,	Heavy dew, haze A. M. clear P. M.
16	—·10	—·12	—·07	74½	82	81	——	,,	,,	do. do. do.
17	—·14	—·12	—·07	74	82	81	——	,,	,,	do. do. do.
18	—·12	—·12	—·07	73½	82½	81	——	,,	,,	do. do. do.
19	—·19	—·19	—·08	75½	83	81	——	,,	E.	do. do. do.
20	—·15	—·15	—·07	75½	82	81	——	S. S. E.	S. S. E.	do. do. do.
21	—·15	—·15	—·06	78½	82	81	——	N. N. E.	,,	do. do. do.
22	—·15	—·15	—·10	77½	82	81	——	,,	S. E.	do. do. do.
23	—·19	—·19	—·06	77½	83	81	——	,,	,,	do. do. do.
24	—·19	—·19	—·10	80	83	82	——	,,	,,	Clear A. M.---Partial clouds P. M.
25	—·18	—·19	—·10	80½	83	82	——	,,	N. E.	Partial clouds A. M. do.
26	—·20	—·20	—·09	80	82	81	——	N. E.	,,	do. clear P. M.
27	—·13	—·20	—·10	80½	83	82	——	,,	,,	Clear A. M. do.
28	—·15	—·15	—·12	76½	83	81½	——	,,	N. by E.	Heavy dew clear A. M.
29	—·15	—·15	—·10	79½	83	81½	——	,,	,,	do. do. do.
30	—·12	—·12	—·05	77½	80½	80	——	,,	,,	Partial dew do. do.
31	—·12	—·10	—·04	76	82½	81½	——	,,	S. E.	do. do. do.

	In. 20ths.
Amount of rain..	1 15⅞
Number of days on which rain has fallen during the month	3
Prevailing winds	A.M. N. Ey. 27 S. Ey. 4 P.M. 19 12

Thermometer.
Mean maximum..81°·58
Mean minimum..76·77
General mean.... 79·65
Mean daily range.. 5·03

Barometer.
Mean maximum....30·16
Mean minimum.....30·08
General mean......30·3
Height from ground floor of Dispensary 2 feet 7¾ inches.

The above Observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN FEBRUARY, 1841.

Days.	Barometer inches. Sunrise.	Barometer inches. 12 to 2 P. M.	Barometer inches. Sunset.	Thermometer degrees. Sunrise.	Thermometer degrees. 12 to 2 P.M.	Thermometer degrees. Sunset.	Pluviometer inches from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	30·12	30·12	30·04	77	82½	81½	—	N. N. E.	S. E.	Heavy dew, clear A. M. clear P. M.
2	—·10	—·10	—·04	77	82	81½	—	S. W.	,,	do. Haze A. M. do.
3	—·14	—·16	—·10	77	82	81	—	,,	,,	do. Clear A. M. do.
4	—·17	—·18	—·16	77	84	81½	—	W. by S.	,,	do. do. do.
5	—·19	—·20	—·16	76	83½	81½	—	E.	S. E.	do. Haze A. M. do.
6	—·19	--·19	—·15	76	84	82	—	N. E.	E. by S.	do. Clear A. M. do.
7	—·20	--·20	—·14	74	83	82	—	,,	,,	do. do. do.
8	—·16	—·16	—·14	75	81½	81	—	,,	,,	do. do. do.
9	—·20	—·20	—·14	74	82	81½	—	,,	S. E.	do. do. do.
10	—·20	—·20	—·13	76	82	81½	—	,,	,,	do. do. do.
11	—·18	—·20	—·13	74	82	81½	—	N. N. E.	E.	oo. do. do.
12	—·18	—·20	—·13	74½	83	81½	—	N. E.	N. E.	do. do. do.
13	—·18	—·20	—·14	75	84	82	—	S. E.	E. by S.	Cloudy A. M.---Cloudy P. M.
14	—·21	—·22	—·14	81	84½	82	—	N. E.	E. by S.	do. do.
15	—·20	—·25	—·21	81	83	79½	—	,,	N. E.	do. and drizzly A. M. Cloudy A. M.
16	—·26	—·26	—·20	77	84	81½	—	,,	,,	Cloudy A. M.---Cloudy P. M.
17	—·24	—·26	—·20	80½	85	81½	—	,,	,,	Partial Clouds A. M. partial clouds P. M.
18	—·23	—·23	—·20	81½	85	82	—	,,	,,	Haze A. M. Clear P. M.
19	—·23	—·23	—·20	77	84	82½	—	,,	E. by S.	do. do.
20	—·21	—·21	—·20	76	84	82½	—	,,	,,	Partial dew clear A. M. Clear P. M.
21	—·26	—·30	—·22	81	84	82½	—	,,	,,	do. Haze A. M. do.
22	—·25	—·26	—·19	80½	81	82½	—	,,	N. E.	do. Clear A. M. do.
23	—·16	—·20	—·12	73	83½	82	—	,,	E. by S.	do, do. do.
24	—·14	—·14	—·12	74	83½	81½	—	E. by S.	E. N. E.	do. do. do.
25	—·11	—·14	—·08	76	85	82½	—	E. N. E.	,,	do. do. do.
26	—·15	—·15	—·08	77½	82½	82	—	,,	E. by S.	do. Haze A. M. do.
27	—·14	—·16	—·05	77½	82	82	—	,,	,,	do. Clear A. M. do.
28	—·07	—·09	—·02	77½	83	82	—	,,	,,	do. do. do.

Barometer.
Mean maximum....30·19
Mean minimum....30·13
General mean.......30·17
Height from ground floor of the Dispensary 2 feet 7¾ inches.

Thermometer.
Mean maximum....83°30
Mean minimum.....76 91
General mean.......80 61
Mean daily range... 6 01

Amount of rain.......0 In. 20ths,
Number of days on which rain has fallen during the month. } 1 day drizzling rain.
Prevailing winds. { A. M. N. E. / P. M. S. E. & do.

The above Observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN MARCH, 1841.

Days.	Barometer inches. Sunrise.	Barometer inches. 12 to 2 P. M.	Barometer inches. Sunset.	Thermometer degrees. Sunrise.	Thermometer degrees. 12 to 2 P. M.	Thermometer degrees. Sunset.	Pluviometer inches, from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	30·05	30·05	29·98	79	83	82	——	S. E.	S. E.	Partial dew, clear A. M. clear P. M.
2	—·05	—·03	—·95	80	83½	82	——	,,	,,	do. do. do.
3	—·10	—·13	30·05	81½	85	82½	——	,,	,,	Cloudy and drizzly A. M. clear P. M.
4	—·08	—·09	—·04	81	83	82½	——	N. E.	E. by S.	Partial clouds A. M. do.
5	—·09	—·11	—·07	81	83½	82	——	,,	S. E.	do. do.
6	—·12	—·15	—·07	81	83½	82½	——	S. E.	,,	Partial dew clear A. M. do.
7	—·12	—·15	—·05	79	83½	82½	——	,,	,,	do. Haze A. M. do.
8	—·06	—·06	29·99	78	83½	81½	——	,,	E. by N.	do. do. do.
9	—·04	—·04	—·99	80½	84	83	——	,,	,,	Clear A. M.—clear P. M.
10	—·04	—·10	30·01	81	85	84	——	,,	N. E.	do. do.
11	—·04	—·04	—·01	82	85¼	84	——	,,	,,	do. do.
12	—·04	—·04	29·95	82	86	84	——	S. W.	S. S. E.	do. strong winds clear P. M.
13	—·00	—·04	—·95	82½	85½	84½	——	S. E.	S. E.	Partial dew clear A. M. do.
14	—·05	—·05	—·98	84	85½	84½	——	,,	S. S. E.	do. do. do.
15	—·05	—·05	30·00	83	86½	85	——	S. S. E.	S. E.	Clear A. M.—clear P. M.
16	—·04	—·04	—·00	82¼	86¼	85	——	S.	S. S. E.	do. do.
17	—·04	—·04	—·00	83	86	85	——	,,	,,	do. do.
18	—·04	—·04	—·00	82½	85	84	——	,,	,,	do. do.
19	—·07	—·10	29·29	83	85¼	85	——	S. S. E.	E. by S.	do. do.
20	—·07	—·07	—·98	83	85	84	——	,,	S. S. E.	do. do.
21	—·07	—·07	—·99	84	86	85	——	,,	S. E.	do. do.
22	—·07	—·07	30·02	82	84	84	——	,,	E. by S.	do. do.
23	—·10	—·10	—·02	83	84	83½	——	,,	,,	do. do.
24	—·10	—·10	—·00	82½	85	83½	——	,,	,,	do. do.
25	—·06	—·10	—·00	81	85	83½	——	,,	S. E.	Partial dew, haze A. M. clear P. M.
26	—·11	—·10	—·00	82	85	83¼	——	,,	,,	do. clear A. M. do.
27	—·04	—·04	—·01	81½	85	83	——	,,	,,	do. do. do.
28	—·07	—·09	—·01	77½	86	84	——	,,	,,	do. do. do.
29	—·10	—·10	—·00	81	81½	85	——	,,	,,	Heavy dew do. do.
30	—·06	—·06	—·00	83½	86	85	——	,,	,,	do. do. do.
31	—·09	—·09	—·00	81¼	87	85	——	,,	,,	Partial dew do. do.

Barometer.	Thermometer.	In. 20ths
Mean maximum......30·07	Mean maximum..84 80	Amount of rain.... 0 00
Mean minimum......29·98	Mean minimum...81 58	Number of days on which rain has fallen during the month 0
General mean.......30·04	General mean....83 24	Prevailing winds. A. M. S. Ey.
Height from ground floor of Dispensary 2 feet 7¾ inches.	Mean daily range. 3 40	P. M. S. Ey.

The above observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS APRIL, 1841.

Days.	Barometer inches. Sunrise.	12 to 2 P. M.	Sunset.	Thermometer degrees. Sunrise.	12 to 2 P. M.	Sunset.	Pluviometer inches, from noon to noon.	Wind. A. M.	P. M.	WEATHER.
1	30·14	30·10	30·00	84	87	86	——	S. E.	S. E.	Partial dew, clear A. M. clear P. M.
2	—·11	—·10	29·98	83½	87	86	——	S.	”	do. cloudy A. M. cloudy P. M.
3	—·06	—·10	—·98	83½	87	85¼	——	S. E.	S. by E.	do. do. do.
4	—·10	—·08	—·98	86	87	85½	——	”	”	Heavy dew, clear A. M. clear P. M.
5	—·10	—·08	—·96	85	87	85½	——	”	”	do. do. do.
6	—·02	—·00	—·96	86	87	85½	——	”	”	do. Partial clouds A. M. and P. M.
7	29·99	—·01	—·95	85	87½	85½	——	”	S. E.	Partial dew, clear A. M. clear P. M
8	30·03	—·10	30·02	84	86	85	——	”	”	Cloudy A. M. cloudy P. M.
9	—·05	—·10	—·04	82	85	85	——	”	E. by S.	Partial due, clear A. M. clear P. M.
10	—·05	—·06	—·00	82¼	86	85	——	E. by S.	S. S. E.	do. do. do.
11	—·01	—·01	29·95	81¼	86	85	——	S. E.	S. E.	do. do. do.
12	—·00	—·00	—·93	81¼	86	86	——	”	”	do. do. do.
13	—·00	—.03	—·94	85¼	89½	87	——	”	S. S. E.	Clear A. M. clear P. M.
14	—·85	—.05	—·94	85¼	88	87	——	”	S. E.	Partial clouds, strong winds, cloudy P. M.
15	—·05	—·05	—·95	85	87½	86½	——	”	”	do. do. do.
16	—·00	—·00	—·92	84	87½	86¼	——	”	”	do. Partial clouds, P. M.
17	—·00	—·05	—·92	85	88	86	——	”	”	do. do.
18	—·06	—·09	30·00	85	88½	87	——	”	S. S. E.	Partial dew cloudy A. M. clear P. M.
19	—·10	—·10	—·00	85	88¼	86	——	”	”	do. clear A. M. do.
20	—·09	—·10	—·00	85	88	86½	——	S. S. E.	”	do. do. do.
21	—·06	—·07	—·00	85¼	88	86¼	——	”	S. E.	do. do. do.
22	—·02	—·02	29·95	84½	87	86½	——	S. E.	”	do. do. do.
23	—·02	—·02	—·95	85	86½	86	——	”	”	do. do. cool at noon do.
24	—·02	—·02	—·95	83½	86½	86	——	”	”	do. do. clear P. M
25	—·02	—·05	—·98	85	87½	86½	——	”	”	do. do. do.
26	—·01	—·01	—·95	84	87	86	——	S. S. E.	”	do. do. do.
27	—·02	—·02	—·93	84	87	86½	——	S. E.	”	do. do. do.
28	—·05	—·07	—·95	86	85½	87	——	S. S. E.	S. S. E.	do. do. sultry do.
29	—·01	—·07	—·95	85½	88	85½	— 1¼	S. S. E.	”	Rain with lightning at 4 P. M. cloudy P. M.
30	—·01	—·05	—·95	82½	81½	83	—·19	W. by N.	N.	Heavy rain, thunder and lightning at 3½ A. M. strong winds, heavy cloudy P. M.

Barometer.	inch.	Thermometer.				
Mean maximum......	30 05	Mean maximum....87°	01	Amount of rain...	In. 20ths. 1 0¼
Mean minimum......	29 96	Mean minimum....84	33	Number of days on which rain has fallen during the month.	3
General mean......	30 02	General mean...... 85	75	Pevailing winds.. A. M.	S. Ey.
Height from ground floor of the Dispensary 2 feet 7¼ inches.		Mean daily range... 2	73	P. M.	do.

The above observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN MAY, 1841.

Days.	Barometer inches. Sunrise.	Barometer inches. 12 to 2 P. M.	Barometer inches. Sunset.	Thermometer degrees. Sunrise.	Thermometer degrees. 12 to 2 P. M.	Thermometer degrees. Sunset.	Pluviometer inches from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	30·02	30·03	29·95	83	85	83	—	E, by N.	E.	Cloudy A. M. cloudy P. M.
2	29·98	29·98	—·95	83	86	84½	—	E .by S.	E. by S.	do clear P. M.
3	—·96	—·94	—·83	84	87½	87	—	E.by S.	S. S. E.	Clear A. M. do.
4	—·88	—·90	—·84	85	87½	87	—	S. S. E.	S. E.	do. do.
5	—·93	—·93	—·84	86	88½	87	—	S. E.	S.E.byS	do. do.
6	—·94	—·90	—·85	87	89½	87	—	S.E.byS	S. by S.	do. do.
7	—·90	—·90	—·80	87	88	88	—	S. S. E.	S. E.	Cloudy and drizzly A. M. sultry partial clouds P. M.
8	—·85	—·90	—·84	86	100	90½	—	S. E.	E. by N.	Partial dew, clear A. M. land wind, clear P. M.
9	—·94	—·95	—·90	87	90½	89½	—	E. by N.	E. by S.	do. do. sea breeze 11 A. M. clear P. M.
10	—·97	30·00	—·96	86½	89	88	—	E. by S.	S. E.	do. do. do. do.
11	30·04	—·04	—·96	87	90	88½	—	S.E.byS	S. E.	do. do. do. do.
12	—·00	29·98	—·96	87½	96	89	—	S. E.	S. E.	do do(sea breeze 12 A. M. strong winds, clear P. M.
13	29·95	—·95	—·85	87½	90½	88½	—	E. by S.	E. by S.	Clear A. M. sea breeze 12 A. M. clear P. M.
14	—·90	—·90	—·83	87	83	86½	—	E. by S.	E. by S.	do. do. 11½ do.
15	—·95	—·95	—·85	87½	89	87¼	—	S. E.	S. E.	Cloudy A. M. rain at 7 P. M. with vivid lightning and thunder continued at intervals during the night.
16	—·84	—·76	—·30	82	80	82	2,12	N.	N.E.&S.	Raining all day and night strong gale at 2 P. M. winds S. W. 8 P. M. become calm at ½ past 7 and 8, the wind suddenly change W. S.
17	—·75	—·73	—·72	81½	84	81	1,2	S.	S. byW.	Cloudy and drizzly, strong winds.
18	—·85	—·85	—·84	80	81	80	11	S.	S.	Cloudy A. M. rain at 9 P. M. partial clouds P. M.
19	—·97	—·95	—·90	81½	85	85	—	W.	S. byN.	do. do. do.
20	30·01	—·96	—·95	83	88	86½	—	S. W.	S.	Clear A. M. black clouds to westward
21	29·95	—·97	—·97	84	89	87	—	S. W.	S. E.	Partial clouds A. M. clear P. M.
22	—·97	—·98	—·97	84	90	86	—	S. E.	S.	do. do.
23	—·95	—·95	—·90	85	94	87	—	S. W.	S. E.	Clear A. M. do.
24	—·90	—·94	—·85	85	94	88½	—	S. W.	S. E.	do. do.
25	—·95	—·95	—·82	84	88	88	—	S.	S. E.	doo
26	—·95	—·99	—·90	86	88	87	—	S. W.	S. E.	doo
27	—·94	—·95	—·87	85	87	87	—	S. W.	S. E.	Cloudy
28	—·90	—·94	—·85	85	93	85	—	S. W.	S.	Clear A. M.
29	—·92	—·90	—·85	85	92	89	—	S. W.	S.	do.
30	—·90	—·83	—·85	86	87	87	—	S. W.	S.	do.
31	—·88	—·84	—·80	85	87	86	—	S. W.	S.	Cloudy A. M.

Amount of rain.. In. 20ths. 4,5
Number of days on which rain has fallen during the month 3
Prevailing winds. A.M. S. Ey. & variable. P.M. S. Ey. Sy. & do

Thermometer
Mean maximum.. 88·80
Mean minimum... 84·90
General mean..... 86·80
Mean daily range.. 3·62

Barometer.
Mean maximum.....29·93
Mean minimum.....29·85
General mean......29·91
Height from ground floor of Dispensary 2 feet 7¾ inches.

The above Observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN JUNE, 1841.

Days.	Barometer inches. Sunrise.	Barometer inches. 12 to 2 P. M.	Barometer inches. Sunset.	Thermometer degrees. Sunrise.	Thermometer degrees. 12 to 2 P.M.	Thermometer degrees. Sunset.	Pluviometer inches from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	29·84	29·85	29·79	84	87	86½	—	S. W.	S. W.	Clear A. M. clear P. M.
2	—·90	—·88	—·80	85	90	88	—	S. W.	SWWS	Clear A. M. clear P. M. sea breeze at 2 cloudy at night.
3	—·87	—·85	—·78	86	88	87	—	S. W.	S. W.	Clear A. M. clear P. M.
4	—·84	—·90	—·75	87	93	90	—	S. W.	S. W.	Clear and sea breeze A. M. cloudy drizzly and thunder at 4 P. M.
5	—·85	—·83	—·77	88	93	87	—	W.	S. W.	Clear A. M. partial clouds and partial rain at 2 P. M.
6	—·85	—·85	—·83	86	95	93	—	W.	S. W.	Partial clouds, drizzly A. M. clear P. M.
7	—·94	—·90	—·86	89	92	93	—	W.	S. E.	Clear A. M. partial clouds P. M.
8	—·94	—·90	—·85	88	93	88	—	W.	S. W.	Clear A. M. sea breeze at 2 very cloudy, thunder and lightning severely.
9	—·90	—·87	—·84	87	94	87	—	W.	S. W.	Clear A. M. cloudy P. M. sea breeze at 2 P. M. until 8, cloudy with lightning.
10	—·92	—·90	—·85	83	89	88	—	W.	S. W.	Clear A. M. Clear P. M.
11	—·90	—·90	—·87	87	93	86	—	W.	S. E.	Clear A. M. thunder with rain at 3. P. M.
12	—·90	—·85	—·85	86	89	87	0,7	S.W.W	S. E. S.	Clear A. M. sea breeze at noon heavy clouds from the west with thunder and lightning.
13	—·90	—·84	—·85	86	89	86	—	SWSE	S.E.S.W	Clear A. M. heavy clouds and rain P. M.
14	—·90	—·87	—·87	85	89	87	1,5	S. W.	S. E. S.	Clear A. M. sea breeze at 2 P. M.
15	—·90	—·90	—·90	85	90	83	—	S.W.W	S. E.	Partial dew clear A. M. sea breeze at 3 cloudy.
16	30·—	30·—	—·94	86	93	87	—	W.	S. E.	Partial dew clear A. M. sea breeze at 3 clear P. M.
17	29·92	29·97	—·82	86	92	89	—	S.	S. E.	do. do. do. ¼ past 1 do.
18	—·95	—·95	—·90	86	90	87½	—	S.W.W	S. E. S.	Clear A. M. rain and thunder at 3 P. M.
19	—·93	—·95	—·90	85	87	87	0,13	W.	S. E.	Partial dew clear A. M. clear P. M.
20	—·95	30·—	—·90	85	87¼	87½	—	W.	S. E.	Cloudy A. M. cloudy P. M.
21	30·—	29·95	—·89	85	89	88	—	W.	W.S.	Clear A. M. cloudy with thunder, lightning and rain at 7 P. M.
22	29·95	—·90	—·90	84	86	87	0,4¼	W.	W.	Cloudy A. M. heavy clouds P. M.
23	—·88	—·82	—·78	84	87	87	0,1	W.	W.	Cloudy A. M. rained at ¼ past 5 P. M.
24	—·82	—·70	—·90	84	89	81	—	W.	W.S.W.	Cloudy A. M. rained from ¼ past 4 to 10 P. M.
25	—·82	—·81	—·74	83	88	86	0,14	W.	S. S. E.	Clear A. M. cloudy with lightning P. M,
26	—·85	—·85	—·85	85	89	87	—	W.	W. S.	Clear A. M. heavy clouds to westward P. M.
27	—·87	—·85	—·83	81	88	87½	—	W.	W.S.W.	Clear A. M. partial dew rained at ¼ past 9 P. M.
28	—·94	—·92	—·88	84	92	87	0,3	W.	W. E.	Clear and very sultry A. M. sea breeze at ¼ past 1 clear P. M.
29	—·90	—·88	—·80	85	93	87	—	W.	W. S.	Clear A. M. night very close, clear P. M,
30	—·82	—·85	—·82	86	89	88	—	W.	W.S.E.	Clear A. M. rained ¼ past , with thunder and lightning.

Amount of rain.....3 7¼ In. 20ths.

Number of days on which rain has fallen during the month. 9

Prevailing winds. A.M. E. W. & W. P.M. S. W. & SE.

Thermometer.
Mean maximum..90 11
Mean minimum..85 46
General mean....87 67
Mean daily range. 4 63

Barometer.
Mean maximum...29·89
Mean minimum....29·84
General mean......29·87
Height from ground floor of the Dispensary 2 feet 7¼ inches.

The above Observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS MADE AT MADRAS IN JULY, 1841.

Days.	Barometer inches. Sunrise.	Barometer inches. 12 to 2 P. M.	Barometer inches. Sunset.	Thermometer degrees. Sunrise.	Thermometer degrees. 12 to 2 P. M.	Thermometer degrees. Sunset.	Pluviometer inches, from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	29·92	29·85	29·87	86	88	84	½	W.	S. E.	Clear A. M. very sultry during night.
2	—·88	—·85	—·85	86	91	87	—	W.	S. E.	Clear A. M. very sultry.
3	—·90	—·90	—·87	86	91	87	—	W.	W. S. E.	Cloudy A. M. clear P. M. and very sultry.
4	—·95	—·91	—·89	86	89	88	—	W.	NWSE	Cloudy A. M. sea breeze at 7 P. M.
5	—·90	—·94	—·87	86	88	87	—	W.	S. E.	Clear A. M. sea breeze at 1 o'clock.
6	—·94	—·93	—·92	87	92	87	—	W.	S. E.	Clear A. M. sea breeze at 1 P. M. night very hot and oppressive.
7	—·95	—·94	—·90	86½	88	87	—	W.	S. E.	Clear A. M. night hot and sultry.
8	30·—	30·—	—·92	85	87	87	—	W.	W. E.	Clear A. M. cloudy at 3 P. M. rained at 3 A. M.
9	29·97	29·93	—·90	85	87	86	7¼	W.	W. S. E.	Cloudy A. M. cool rained at ½ past 9 P. M.
10	—·92	—·90	—·90	84	90	87	2½	W.	W. S. E.	Clear A. M. night cool, day very hot sea breeze at 6 P. M.
11	—·92	—·92	—·89	85	87	86	—	W.	W. S.	Cloudy A. M. clear P. M. cloudy and drizzling at 5 P. M.
12	—·85	—·84	—·82	85	87½	87½	—1	W.	W.	Clear A. M. night sultry, heavy clouds and slight rain from 6 to 10 P. M.
13	—·88	—·84	—·88	84	88¼	88	—2	W.	W.	Cloudy A. M. night cool.
14	—·90	—·84	—·80	85	92	88	—	W.	E. W S. E	Clear A. M. night very hot, morning cool and pleasant.
15	—·85	—·84	—·80	86	90	89	—	W.	W. S. E.	Clear A. M. sea breeze at 4 P. M. heavy clouds at P. M. shower of rain.
16	—·86	—·85	—·85	86	92	83	—	W. S. E.	S. E.	Clear A. M. sea breeze at 6 P. M.
17	—·93	—·95	—·90	86	90	88	—	W. S. E	S. E.	Clear A. M. sea breeze at 10 A. M.
18	—·98	—·90	—·86	86	88	87	—	W.	S. E.	Clear A. M. sea breeze from 1 P. M. to 5 A. M.
19	—·95	—·89	—·84	86	90	88	—	W.	S. E.	Clear A. M. rained at 4 P. M.
20	—·94	—·90	—·86	85	91½	88	—1½	S. W.	S. E.	Clear A. M. heavy clouds and rain at 6 P. M.
21	—·94	—·90	—·86	86	89	88	1	W.	E. S. W.	Cloudy all day, sea breeze at 2 P. M. high wind during night.
22	—·94	—·85	—·81	85	92	93	—	W.	W.	Clear A. M. oppressive during the day.
23	—·92	—·87	—·80	88	91	92	—	W.	W.	Clear A. M. sultry at noon and afternoon.
24	—·90	—·86	—·80	87	92	92	—	W.	W.	do. do.
25	—·87	—·85	—·81	87	93	93	—	W.	S. E.	Clear A. M. sea breeze at 5½ P. M.
26	—·87	—·83	—·82	87	94	88	—	W.	S. E.	Clear A. M. sultry at noon refreshing breeze and rain at 6 P. M.
27	—·92	—·90	—·85	86	92	87	7	W.	S. E.	Clear A. M, 1¼ P. M. partly sea breeze shower at 7 P. M. and again at 9 P. M.
28	—·90	—·85	—·80	84	93	87	—	S. W.	S. E.	Clear A. M. rain at 7 P. M.
29	—·90	—·85	—·82	85	92	87	—	W.	S. E.	Clear A. M. rain at sun set and puff of sea breeze.
30	—·90	—·85	—·80	85	92	87	—	S. W.	S. E. W.	Hazy A. M. disagreeable land wind, sultry at night.
31	—·95	—·90	—·90	87	93	85	—	W.	S. E.	Hazy A. M. sultry during the day, slight rain at 4½ P. M. and pleasant in the evening.

Amount of rain.... In. 1, 20ths 3

Number of days on which rain has fallen during the month 12

Prevailing winds: A. M. West. P. M. S. E.

Thermometer. °
Mean maximum..90·33
Mean minimum..85·75
General mean...87·98
Mean daily range. 4·70

Barometer. Inches.
Mean maximum.....29·91
Mean minimum.....29·85
General mean......29·88
Height from ground floor of the Dispensary 2 feet 7¾ inches.

The above observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS MADE AT MADRAS AUGUST, 1841.

Days.	Barometer inches. Sunrise.	Barometer inches. 12 to 2 P. M.	Barometer inches. Sunset.	Thermometer degrees. Sunrise.	Thermometer degrees. 12 to 2 P. M.	Thermometer degrees. Sunset.	Pluviometer inches, from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	29·90	29·96	29·85	85	91	87		W.	S. E.	Clear A. M. pleasant in the evening.
2	—·97	—·92	—·90	85	95	85		,,	,,	Clear A. M. oppressive during the day but agreeable in the evening.
3	—·97	—·92	—·86½	85	89	87		,,	,,	Clear A. M. refreshing breeze in the afternoon.
4	—·95	—·92½	—·85	85	90	86		,,	,,	Clear A. M. rain last night.
5	—·95	—·92	—·85	83	88	85	5	,,	,,	Clear A. M. rain at 9 P. M.
6	—·97	—·98	—·90	83	87	86	1	,,	,,	Cloudy A. M. rain at sun set and during the night.
7	—·97	—·97	—·90	83	86	85	6½	,,	,,	Cloudy A. M. hazy nearly all day, rain at 2 o'clock last night.
8	—·95	—·93	—·87½	82	85	84	1	,,	,,	Cloudy and drizzling A. M. very little sun during the day.
9	—·87	—·95	—·88	82	85	83		S. W.	,,	Cloudy A. M. pleasant during the day and rain at midnight.
10	—·97	—·92½	—·88	82	85	84	2	W.	,,	Cloudy A. M. rain in the afternoon and also at night.
11	—·94	—·90	—·90	83	85	84	7	,,	,,	Cloudy A. M. rain in afternoon and at night lightning.
12	—·93	—·90	—·90	83	86	84	14	,,	S.	Raining A. M. cloudy nearly all day with little or no rain.
13	—·90	—·90	—·90	83	86	83	2¼	,,	S. E.	Cloudy A. M. sultry at noon.
14	—·95	—·91	—·90	82	85	83		,,	S. E.	Cloudy A. M. which continued till noon.
15	—·94	—·94	—·90	83	85	83	3	,,	E.	Cloudy A. M. sultry at noon and rain at 9 P. M.
16	—·89	—·87	—·80	83	87	85		,,	S. E.	Cloudy A. M. rain at 4½ P. M. and also at night lightning.
17	—·87	—·87	—·80	82	86	84	1	,,	S. E.	Cloudy A. M. 2 or 3 heavy showers during the night.
18	—·89	—·90	—·84	82	85½	83	16½	,,	S. E.	Cloudy A. M. pleasant during the day.
19	—·89	—·92	—·86	82	84	83		,,	S.	Cloudy A. M. slight dew and high wind during the night.
20	—·95	—·95	—·90	82	85	84		,,	S.	Cloudy A. M. sultry during the day and rain at night.
21	30·00	30·00	—·96	82	84	84	6	,,	S.	Cloudy and drizzling A. M.
22	—·02	—·00	—·97	82	84	84		,,	S.	Cloudy A. M. drizzling in afternoon and rain at night.
23	—·02	29·95	—·95	80	84	83	8	,,	S. E.	Cloudy A. M. pleasant during the day rain at night.
24	—·02	—·90	—·90	80	85	84	10	S. W.	S.	Cloudy and drizzling A. M. day fine.
25	29·90	—·92	—·85	82	83	84		W.	S. E.	Cloudy A. M. sultry during the day and thunder at night.
26	—·90	—·90	—·90	80	84	82	1	,,	S. W.	Cloudy A. M. thunder and looked over east at 5 P. M. rain at night.
27	—·97	30·00	—·92	80	81	82	1 11	,,	S. W.	Cloudy A. M. thunder, lightning rained at night.
28	30·02	—·00	—·92	80	84	82	1 18	,,	S. W.	Cloudy A. M. lightning in the evening.
29	—·00	—·00	—·92	80	81	82		,,	S. E.	Cloudy A. M. lightning in the evening heavy dew.
30	29·95	29·90	—·89	82	80	84		S. W.	S. E.	Clear A. M. and very pleasant, heavy dew.
31	—·95	—·90	—·89	82	81	84		SW.	S. E.	Clear A. M. pleasant day, thunder lightning and rain at night.

	In. 20ths.
Amount of rain...	8 12½
Number of days on which rain has fallen during the month.	17
Prevailing winds..	A. M. Westerly. P. M. S. E.

Thermometer.	°
Mean maximum......	85·66
Mean minimum......	82·25
General mean.......	83·96
Mean daily range.....	3·75

Barometer.	Inches.
Mean maximum......	29·91
Mean minimum......	29·88
General mean.......	29·92

Height from ground floor of the Dispensary 2 feet 7½ inches.

The above observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN SEPTEMBER, 1841.

Days.	Barometer inches. Sunrise.	Barometer inches. 12 to 2 P. M.	Barometer inches. Sunset.	Thermometer degrees. Sunrise.	Thermometer degrees. 12 to 2 P. M.	Thermometer degrees. Sunset.	Pluviometer inches from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	29·95	29·90	29·90	81	84	83	1 3	W.	S. W.	Dark, cloudy and raining A. M. thunder lightning and rain last night.
2	—·95	—·87	—·80	82	85	82	0 ½	W.	S. W.	Cloudy A. M. thunder and rain P. M. clear moonshining night.
3	—·85	—·87	—·79	82	85	83	——	W.	S.	Clear A. M. pleasant day, lightning at night and dew.
4	—·85	—·87	—·80	82	85	84	——	W.	S.	Serene A. M. sultry day sky over cast and rain 6 P. M.
5	—·92	—·91	—·85	82	86	84	5	W.	S. E.	Serene A. M. slight rain in evening variable winds.
6	—·89	—·90	—·85	82	87	85	——	W.	S.	Clear A. M. heat comparatively intense.
7	—·85	—·85	—·83	82	89	90	——	W.	S. E.	Clear A. M. oppressive day strong westerly high wind till 1 P. M. sea breeze [at 6 P. M.
8	—·90	—·85	—·83	84	85	87	——	W.	S. E.	Clear A. M. dew.
9	—·90	—·85	—·85	83	85	84	——	W.	S. E.	Clear A. M.
10	—·90	—·90	—·85	83	88	84	——	S.	E.	Clear A. M. sea breeze.
11	—.90	—·90	—·85	85	87	86	——	W.	S. E.	do. do. do.
12	—·93	—·92	—·88	84	88	87	——	W.	E.	Cloudy A. M. rain thunder lightning at 7 P. M.
13	—·90	—·90	—·89	86	85	86	1 7	W.	E.	Cloudy A. M. sea breeze dew last night.
14	—.95	—·92	—·88	85	81	86	——	S. E.	S. E.	Clear A. M.
15	—·95	—·90	—·87	85	82	86	——	S.	S. E.	do. do.
16	—·90	—·90	—·85	84	82	86	——	W.	S. E.	Cloudy A. M. sultry day.
17	—·95	—·90	—·90	84	86	86	——	W.	S. E.	Cloudy A. M. drizzling at 7 P. M.
18	—·95	—·94	—·90	85	88	86	——	S. E.	S. E.	Cloudy and drizzling A. M. partly sea breeze.
19	30·00	—·93	—·90	85	87	86	——	S.	S. E.	Clear A. M. sultry day.
20	29·97	—·90	—·90	85	87	86	——	W.	S. E.	do. do. do.
21	—·97	—·90	—·92	85	87	86	——	W.	N. E.	Clear A. M. sultry sea breeze.
22	—·98	—·90	—·92	85	86	86	——	S. E.	S.	Clear A. M. sultry day, rain at 5 P. M. and at night.
23	—·97	30·00	—·92	85	85	86	2	N. W.	S.	Cloudy A. M.
24	—·97	29·97	—·95	83	88	85	——	W.	S.	Clear A. M.
25	30·00	—·92	—·95	84	87	85	——	W.	E.	Clear A. M. sea breeze pleasant day.
26	—·00	—·92	—·95	85	87	84	——	W.	E.	Clear A. M. sea breeze rain at 1 P. M.
27	29·97	—·95	—·90	85	90	88	2¼	W.	E.	Clear A. M. sea breeze.
28	—·95	—·90	—·88	84	91	88	——	W.	N. E.	Clear A. M. sea breeze thunder, lightning and rain.
29	—·92	—·90	—·88	84	90	88	8	W.	E.	Cloudy A. M. sea breeze oppressive day, rain P. M.
30	—·95	—·90	—·89	85	90	88	3	W.	E.	Clear A. M. oppressive day, sea breeze.

Barometer.	Thermometer	
Inches.	°	Amount of rain...... In. 20ths 3 11
Mean maximum.....29·93	Mean maximum.. 86·43	Number of days on which rain has fallen during the month 11
Mean minimum......29·84	Mean minimum... 83·86	Prevailing winds. A. M. W. 23, S. 3, S.E. 3, N. W.
General mean.......29·89	General mean..... 85.33	P. M. S. E. 12 E 8 S. 6, n W. 5, & N E 2.
Height from ground floor of Dispensary 2 feet 7¾ inches.	Mean daily range.. 3·43	

The above Observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN OCTOBER, 1841.

Days.	Barometer inches. Sunrise.	12 to 2 P. M.	Sunset.	Thermometer degrees. Sunrise.	12 to 2 P. M.	Sunset.	Pluviometer inches from noon to noon.	Wind. A. M.	P. M.	WEATHER.
1	29,95	29·90	29·90	84	88	88		W.	S. W.	Clear A. M. sultry all day.
2	—·95	—·92	—·90	84	92	88	„	W.	E.&S.E.	Clear A. M. sultry and oppressive, sea breeze P. M.
3	—·98	—·98	—·92	85	91	88	—	W.	E.&S.E.	Clear A. M. oppressive day, sea breeze.
4	30·05	30·01	30·00	86	87	86	1	W.	E.	Clear A. M. shower at noon, sea breeze dew at night.
5	—·05	—·05	—·00	85	87	86		W.	E.	Clear A. M. some thunder and lightning.
6	—·10	—·05	—·05	83	85	85	„ 7	W.	E.	Cloudy, drizzling and thunder A. M. rain in forenoon sea breeze, rain at [night.
7	—·10	—·05	—·05	84	85	85	11	W.	E.	Rain, thuuder A. M. and also at midday, rain at night likewise.
8	—·12	—·15	—·06	83	86	86	3	N. W.	E.	Cloudy, aud thunder A. M. sea breeze dew.
9	—·10	—·05	—·06	83	88	86	„	N.	E.	Clear A. M. saltry noou, sea breeze rain.
10	—·05	—·10	29·98	82	81	84	1 4	N. W.	N. E.	Cloudy A. M. rain forenoon cloudy and sultry P. M. rain at night.
11	—·02	—·00	30·00	80	80	82	1 10	N. E.	N. E.	Cloudy and over cast A. M. eonstant rain wind variable.
12	—·05	—·05	—·02	80	80	80	3 12	N. E.	N. E.	Raining A. M. raining forenoon, very wet day altogether.
13	—·05	—·00	—·00	78	78	78	1 15	N. E.	N. E.	Downpour A. M. rain at noon and musky sky.
14	—·00	—·00	—·00	78	80	78	1	N. E.	N. E.	Cloudy A. M. rain at night.
15	—·02	—·00	29·93	79	80	82	1 8	N. E.	N. E.	Cloudy A. M. sultry day, rain at night.
16	—·05	—·00	30·00	78	84	82	5	N.	S. E.	Clear A. M. sultry day.
17	—·02	—·05	—·00	84	86	84	„	S. E.	E.	Clear A. M. sea breeze, sunny day, rain at 3 P. M.
18	—·05	—·00	—·00	83	83	84	4	S. E.	E.	Raining do. alternate sun and clouds during the day.
19	—·05	—·00	—·00	82	85	84	„	S. E.	E. by S.	Partial dew cloudy A. M. rain at 8 o'lock and at night also.
20	—·02	—·05	—·00	82	86	84	4	N. W.	E. by S.	Clear A. M. rain at night.
21	—·00	—·00	—·00	83	85	84	„	Variable.	N.	Clear A. M. slight rain last night.
22	—·05	—·00	—·00	83	80	84	5	N. E.	N. E.	Clear A. M. rain all day and at night also.
23	—·05	—·00	—·01	83	81	83	3 3	N. E.	N. E.	Raining A. M. cloudy and overcast.
24	—·05	—·00	—·00	78	80	82	4	N. E.	N. E.	Clear A. M. rain in forenoon and all night.
25	—·05	—·05	—·00	79	81	79	17	N. E.	N. E.	Raining A. M. raining more or less all day.
26	—·05	29·98	29·98	79	83	78	1 „	N. E.	N. E.	Cloudy A. M. rain at night.
27	—·00	—·98	—·95	79	83	83	1 10	N. E.	N. E.	Raining A. M. and nearly all day.
28	29·95	—·90	—·90	78	80	79	1 6	N. E.	N. E.	Cloudy A. M. rain all day and night.
29	—·92	—·87	—·87¼	79	82	80	2 18	N. E.	N. E.	Heavy rain A. M. thunder and lightning blowing half a gale of wind, [winds variable.
30	—·95	—·90	—·92	80	82	82	1 10	N. E.	N. E.	Raining A. M. strong gusts of wind, alternative showers.
31	—·97	30·00	—·95	80	85	82	1 10	E.	N. E.	Clear A. M. slight showers now and then.

Amount of rain......In. 20ths, 24 8

Number of days on which rain has fallen during the month. 24

Pevailiing winds. A. M. NE13W7SE4 NW3N2E1 valbe· P. M. NE16E8SE25 S W 1 N 1

Thermometer. Mean maximum..83° 67 Mean minimum...81 38 General mean.....82 72 Mean daily range. 3 03

Barometer. Mean maximum.....30·02 Mean minimum.....29·98 General mean.......0·00 Height from ground floor of the Dispensary 2 feet 7¼ inches.

The above Observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS MADE AT MADRAS IN NOVEMBER, 1841.

Days.	Barometer inches.			Thermometer degrees.			Pluviometer inches, from noon to noon.	Wind.		WEATHER.
	Sunrise.	12 to 2 P. M.	Sunset.	Sunrise.	12 to 2 P. M.	Sunset.		A. M.	P. M.	
1	29·97	29·90	29·90	80	82	83		N. E.	N. E.	Cloudy A. M. hazy day, rain at night.
2	—·97	30·00	30·00	81	82	81	1 8	N. E.	N. E.	Cloudy A. M. rain all day and at night also.
3	30·00	—·05	—·05	79	82	81	1 3	N. E.	N. E.	Raining A. M. also during the day and night.
4	—·00	—·05	—·00	80	84	82	15	N. E.	N. E.	Cloudy A. M. alternate showers and sun.
5	—·00	—·00	—·00	81	84	82	11	N. E.	N. E.	Cloudy A. M. drizzling noon, raining at night.
6	—·04	—·00	—·00	80	84	84	5	N. E.	E.	Clear A. M. shower at noon, sultry day.
7	—·07	—·00	—·00	80	84	83		N. E.	N. E.	Clear A. M. heavy dew.
8	—·02	—·00	29·95	80	85	84		N. E.	N. E.	Clear A. M. dew rain at night.
9	—·02	—·00	30·00	80	84	84	2	N. E.	N. E.	Cloudy A. M. showers at noon and at night.
10	—·03	—·00	—·00	80	83	84	14	N. E.	N. E.	Cloudy A. M.
11	29·98	29·95	29·93	78	82	82		N. E.	N. E.	Clear A. M. dew, sultry.
12	—·97	—·97	—·98	78	84	82		N. E.	N. E.	Clear A. M. dew, sultry day.
13	30·00	—·98	—·98	78	84	82		N. E.	N. E.	Clear A. M. dew.
14	—·00	30·00	30·00	78	84	82	3	N. E.	N. E.	Shower A. M. drizzling noon, elear P. M.
15	—·03	—·04	—·01	76	83	82		N. E.	N. E.	Clear A. M. dew wind at times blowing steadily from the north.
16	—·07	—·00	—·00	75	83	81		N. E.	N. E.	Clear A. M. dew do. do.
17	—·10	—·10	—·10	75	83	81		N. E.	N. E.	Clear A. M. dew do. do.
18	—·15	—·10	—·05	75	83	81		N. E.	N. E.	Clear A. M. dew do. do.
19	—·10	—·10	—·05	75	84	81		N. E.	N. E.	Clear A. M. dew do. do.
20	—·10	—·10	—·10	75	84	81		N. E.	N. E.	Clear A. M. dew do. do.
21	—·10	—·10	—·10	75	84	81		N. E.	N. E.	Clear A. M. dew do. do.
22	—·10	—·10	—·10	75	84	81		N. E.	N. E.	Clear A. M. dew do. do.
23	—·12	—·10	—·10	75	84	81		N. E.	N. E.	Clear A. M. dew do. do.
24	—·10	—·10	—·10	75	84	81		N. E.	N.	Clear A. M. dew
25	—·10	—·07	—·07	78	84	81		N. E.	N.	Clear A. M. dew drizzle during the day.
26	—·10	—·09	—·13	80	83	83	18	N. E.	N.	Hazy A. M. showers in the forenoon and at night.
27	—·12	—·07	—·07	80	83	83	12	N. E.	N. E.	Hazy A. M. flying elouds.
28	—·15	—·07	—·07	81	83	83		N. E.	N. E.	Hazy A. M. do.
29	—·10	—·10	—·10	80	83	83		N. E.	N. E.	Hazy A. M. pleasant morning.
30	—·10	—·10	—·10	78	83	83		N. E.	N. E.	Clear A. M.

	In.	20ths
Amount of rain....	6	11
Number of days on which rain has fallen during the month		11
Prevailing winds. A. M. N. E. 30. P. M. N. E. 25, N. 3, E. 1.		

Thermometer. °
Mean maximum.. 83·43
Mean minimum... 78·03
General mean.... 81·18
Mean daily range. 5·06

Barometer. Inches.
Mean maximum..... 30·05
Mean minimum..... 30·03
General mean...... 30·04
Height from ground floor of the Dispensary 2 feet 7¾ inches.

The above observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS MADE AT MADRAS DECEMBER, 1841.

Days.	Barometer inches. Sunrise.	Barometer inches. 12 to 2 P. M.	Barometer inches. Sunset.	Thermometer degrees. Sunrise.	Thermometer degrees. 12 to 2 P. M.	Thermometer degrees. Sunset.	Pluviometer inches, from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	30·10	30·11	30·10	78	83	83	——	N. E.	N. E.	Clear A. M.
2	—·12	—·11	—·10	77	83	83	——	,,	,,	Clear A. M. wind high.
3	—·10	—·12	—·10	75	83	83	——	,,	,,	Clear A. M. do. drizzling.
4	—·10	—·10	—·10	78	85	83	——	,,	,,	Hazy A. M. do. cloudy P. M.
5	—·10	—·10	—·10	80	85	83	——	,,	,,	Hazy A. M.
6	—·10	—·12	—·05	80	85	84	——	,,	,,	Clear A. M. flying clouds.
7	—·12	—·12	—·10	80	85	84	——	,,	,,	Clear A. M. dew, pleasant morning.
8	—·10	—·10	—·10	75	83	83	——	,,	,,	Clear A. M. dew do. do.
9	—·05	—·08	—·05	75	83	83	——	,,	,,	Clear A. M. dew do. do.
10	—·05	—·05	—·00	80	84	85	——	,,	,,	Clear A. M. dew do. do.
11	—·05	—·05	—·00	80	81	85	——	,,	,,	Clear A. M. dew do. do.
12	—·00	—·00	29·98	81	86	88	——	,,	,,	Clear A. M. dew
13	—·00	29·96	—·98	81	85	88	——	,,	,,	Clear A. M. dew
14	—·12	30·04	30·05	80	84	83	——	,,	,,	Clear A. M. dew
15	—·05	—·05	—·05	80	83	83	——	,,	,,	Clear A. M. flying clouds.
16	—·05	—·05	—·05	75	83	83	——	,,	,,	Clear A. M. dew.
17	—·05	—·05	—·05	74	83	83	——	,,	,,	Clear A. M. dew.
18	—·10	—·10	—·10	76	83	84	——	,,	,,	Clear A. M. dew.
19	—·10	—·10	—·10	75	83	84	——	,,	,,	Clear A. M. dew.
20	—·07	—·05	—·05	74	80	81	——	,,	,,	Clear A. M. dew.
21	—·10	—·15	—·05	75	80	80	——	,,	,,	Clear A. M. dew.
22	—·05	—·02	—·00	75	78	77	——	,,	,,	Cloudy A. M. dew cloudy all day, wind at times westerly.
23	—·05	—·10	—·07	76	78	80	1 3	,,	,,	Rain last night raining A. M. and murky cloudy day.
24	—·05	—·10	—·10	75	78	80	——	,,	,,	Clear A. M. flying clouds.
25	—·10	—·10	—·10	74	78	80	——	,,	,,	Clear A. M. do.
26	—·05	—·10	—·10	74	78	80	——	,,	,,	Clear A. M. dew do.
27	—·05	—·10	—·10	74	80	80	——	,,	,,	Clear A. M. dew do.
28	—·05	—·05	—·04	75	80	80	——	,,	,,	Clear A. M. dew do.
29	—·05	—·10	—·10	75	80	81	——	,,	N.	Clear A. M. dew wind at times northerly.
30	—·06	—·05	—·05	75	80	81	——	,,	N. N. E.	Clear A. M. dew cloudy day.
31	—·08	—·05	—·05	75	80	81	——	,,	N.	Clear A. M. dew flying clouds, cloudy P. M. and small rain.

Barometer. Inches.
Mean maximum......30·07
Mean minimum......30·06
General mean......30·06
Height from ground floor of the Dispensary 2 feet 7½ inches.

Thermometer. °
Mean maximum.....82·45
Mean minimum.....76·67
General mean.....80·38
Mean daily range.....5·96

Amount of rain... In. 20ths. 1 3
Number of days on which rain has fallen during the month. 3
Prevailing winds.. A. M. N. E. 31. P. M. N. E. 29 N. 2.

The above observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN JANUARY, 1812.

Days.	Barometer inches. Sunrise.	Barometer inches. 12 to 2 P. M.	Barometer inches. Sunset.	Thermometer degrees. Sunrise.	Thermometer degrees. 12 to 2 P. M.	Thermometer degrees. Sunset.	Pluviometer inches from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	30·05	30·05	29·98	75	75	75	7	N.	N.&Var.	Cloudy and windy A. M. small rain blowing fresh.
2	—·05	—·05	30·05	75	78	78		N.	N.	Cloudy A. M. rather cloudy day although fine.
3	—·05	—·02	—·00	75	80	81		N.	N. E.	Clear A. M. flying clouds, cloudy P. M.
4	—·05	—·05	—·05	75	80	80	7	N. E.	,,	Cloudy A. M. showers during the day, rain at night.
5	—·10	—·10	—·10	78	82	82	10	N. N. E.	,,	Cloudy A. M. cloudy at uoon.
6	—·10	—·10	—·12	78	82	82		N. E.	,,	Clear A. M. flying clouds.
7	—·10	—·10	—·12	78	82	82		,,	,,	Clear A. M. do.
8	—·10	—·12	—·12	75	82	82		,,	,,	Clear A. M. do.
9	—·10	—·12	—·12	75	82	82		,,	,,	Clear A. M. do. high wind at night.
10	—·12	—·12	—·12	75	82	82		N. N. E.	,,	Cloudy A. M. cloudy and small rain all day and blowing fresh.
11	—·12	—·12	—·12	75	82	84		N. N. E.	,,	Cloudy A. M. high wind, small rain cloudy P. M.
12	—·15	—·12	—·15	76	80	84	14	N. E.	,,	Clear A. M. flying clouds.
13	—·15	—·20	—·15	78	80	84	2	,,	,,	Cloudy A. M. clear day, flying clouds.
14	—·15	—·15	—·15	79	82	82		,,	,,	Clear A. M. pleasant day.
15	—·15	—·15	—·15	78	82	82		,,	,,	Clear A. M. do.
16	—·15	—·15	—·15	77	82	82		,,	,,	Clear A. M.
17	—·15	—·15	—·15	78	82	82		,,	,,	Clear A. M.
18	—·15	—·15	—·15	78	82	82		,,	,,	Clear A. M.
19	—·15	—·15	—·15	78	83	82		,,	,,	Clear A. M.
20	—·15	—·15	—·15	78	83	82		,,	,,	Clear A. M.
21	—·15	—·15	—·15	78	84	82		,,	,,	Clear A. M.
22	—·15	—·17	—·15	78	82	82		,,	,,	Clear A. M.
23	—·15	—·16	—·15	75	81½	82		,,	,,	Clear A. M.
24	—·15	—·15	—·15	75	81½	82		,,	,,	Clear A. M.
25	—·15	—·18	—·18	75	82	82		,,	,,	Clear A. M. southerly wind now and then.
26	—·18	—·20	—·18	75	82	82		,,	S.	Clear A. M. do.
27	—·18	—·19	—·18	75	82	82		,,	S.	Clear A. M. do.
28	—·18	—·18	—·18	75	82	82		,,	S.	Clear A. M. do.
29	—·18	—·18	—·18	75	82	82		,,	N. E.	Clear A. M. do.
30	—·18	—·18	—·18	75	82	82		,,	N. E.	Clear A. M.
31	—·18	—·20	—·20	75	83	84		,,		Clear A. M.

The above Observations were kept at the Fort Dispensary.

Amount of rain...... In. 20ths 2
Number of days on which rain has fallen during the month ... 5
Prevailing winds. A. M. N. 2 27 N. 3 S. 1. P. M. ,, 26 ,, 2 ,, 3.

Thermometer
Mean maximum.. ° 81·74
Mean minimum... 76·29
General mean..... 79·84
Mean daily range.. 5·58

Barometer. Inches.
Mean maximum....30·13
Mean minimum.....30·13
General mean.......30·13
Height from ground floor of Dispensary 2 feet 7¾ inches.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN FEBRUARY, 1842.

Days.	Barometer inches. Sunrise.	Barometer inches. 12 to 2 P. M.	Barometer inches. Sunset.	Thermometer degrees. Sunrise.	Thermometer degrees. 12 to 2 P.M.	Thermometer degrees. Sunset.	Pluviometer inches from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	30·20	30·20	30·20	78	84	84	—	N. E.	N. E.	Clear A. M.
2	—·20	—·20	—·20	78	84	84	—	,,	,,	Clear A. M.
3	—·20	—·20	—·20	78	85	84	—	,,	,,	Clear A. M. but morning foggy with much dew on the ground.
4	—·20	—·20	—·20	78	85	85	—	,,	,,	Clear A. M. do. do. sea breeze,
5	—·15	—·15	—·15	77	82	84	—	,,	,,	Clear A. M. do. do. do.
6	—·15	—·15	—·15	75	82	84	—	,,	,,	Clear A. M. do. do. do.
7	—·15	—·15	—·15	75	82	84	—	,,	,,	Clear A. M. do. do. do.
8	—·15	—·15	—·15	75	82	84	—	,,	,,	Clear A. M. do. do. do.
9	—·15	—·15	—·15	75	82	84	—	,,	,,	Clear A. M. do. do. do.
10	—·15	—·15	—·15	75	82	84	—	,,	,,	Clear A. M. do. do. do.
11	—·15	—·15	—·15	75	82	84	—	,,	,,	Clear A. M. do. do. do.
12	—·20	—·20	—·20	76	82	84	—	,,	,,	Clear A. M. do. do. do.
13	—·20	—·20	—·20	76	84	86	—	,,	,,	Clear A. M. do. do. do.
14	—·20	—·20	—·10	76	85	86	—	S. E.	,,	Clear A. M. do. do. do.
15	—·15	—·15	—·15	76	82	81	—	N. E.	,,	Clear A. M. do. do. do.
16	—·15	—·15	—·15	75	82	81	—	,,	,,	Clear A. M. do. do. do.
17	—·15	—·15	—·15	75	82	81	—	,,	,,	Clear A. M. do. do. do.
18	—·15	—·15	—·15	75	83	81	—	,,	,,	Clear A. M. do. do. do.
19	—·15	—·15	—·15	75	83	81	—	,,	,,	Clear A. M. do. do. do.
20	—·15	—·15	—·15	75	83	81	—	,,	,,	Cleer A. M. do. do. do.
21	—·15	—·15	—·15	75	83	81	—	,,	,,	Clear A. M. do. do. do.
22	—·15	—·15	—·15	75	83	81	—	,,	,,	Clear A. M. do. do. do.
23	—·15	—·10	—·10	75	83	81	—	,,	,,	Clear A. M. do. do. do.
24	—·15	—·15	—·15	75	83	81	—	,,	S.	Clear A. M. do. do. do.
25	—·15	—·15	—·15	78	85	83	—	,,	S.	Clear A. M. do. do. do.
26	—·15	—·15	—·15	78	85	83	—	,,	S.	Clear A. M. do. do. do.
27	—·15	—·15	—·15	78	85	83	—	,,	S.	Clear A. M. do. do. do.
28	—·15	—·15	—·15	78	85	83	—	,,	S.	Clear A. M. do. do. do.

Amount of rain....... In. 20ths, 0 0

Number of days on which rain has fallen during the month: None.

Pevailing winds: A. M. N. E. 27 S. E. 1. P. M. N. E. 23 S. 5

Thermometer. °
Mean maximum....83·21
Mean minimum.....76·07
General mean.......80·73
Mean daily range.. 7·82

Barometer. Inches.
Mean maximum....30·16
Mean minimum.....30·15
General mean......30·16
Height from ground floor of the Dispensary 2 feet 7½ inches.

The above Observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS MADE AT MADRAS IN MARCH, 1812.

Days.	Barometer inches. Sunrise.	Barometer inches. 12 to 2 P. M.	Barometer inches. Sunset.	Thermometer degrees. Sunrise.	Thermometer degrees. 12 to 2 P. M.	Thermometer degrees. Sunset.	Pluviometer inches, from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	30·10	30·10	30·10	75	85	83	—	E. Var.	S.	Clear A. M. foggy morning, dew.
2	—·10	—·10	—·10	76	85	83	—	E.	S.	Clear do. do. do. sea breeze.
3	—·10	—·10	—·10	77	86	84	—	E	S.	Clear do. do. do.
4	—·10	—·10	—·10	77	86	84	—	E.	E.	Clear do. do. do.
5	—·10	—·10	—·10	78	86	84	—	E.	S. E.	Clear do. do. do.
6	—·10	—·10	—·10	78	86	84	—	E.	S. E.	Clear do. do. do.
7	—·10	—·10	—·10	78	86	84	—	W.	S.	Clear do. do. do.
8	—·10	—·10	—·10	78	86	84	—	S. W.	S.	Clear do. do. do.
9	—·10	—·10	—·10	78	86	84	—	W.	S.	Clear do. do. do.
10	—·10	—·10	—·10	78	86	84	—	W.	S.	Clear do. do. do.
11	—·10	—·10	—·05	78	86	84	—	S. W.	S.	Clear do.
12	—·05	—·05	—·10	78	98	85	—	S. W.	S.	Clear do.
13	—·05	—·05	—·05	80	88	85	—	S. W.	S.	Clear do.
14	—·00	—·00	29·98	80	88	85	—	S. W.	S.	Clear do. day sultry, and night oppressive.
15	—·00	29·95	—·98	82	86	86	—	S. W.	S.	Clear do.
16	—·00	—·95	—·98	84	88	87	—	S. W.	S.	Clear do. strong southerly breeze.
17	—·00	—·98	—·98	85	88	87	—	S. W.	S.	Clear do.
18	—·10	30·00	30·00	85	88	85	—	W.	S.	Clear do.
19	—·10	—·10	—·10	84	88	85	—	W.	S.	Clear do. slight drizzling in forenoon.
20	—·10	—·10	—·00	84	87	85	—	W.	S.	Clear do. sultry day.
21	—·05	—·00	29·98	84	88	87	—	W.	S.	Clear do. night rather sultry.
22	—·05	—·05	30·05	84	88	87	—	W.	S.	Clear do.
23	—·10	—·10	—·10	84	88	87	—	W.	S. E.	Hazy do. pleasant day.
24	—·07	—·10	—·10	83	87	86	—	W.	S. E.	Heavy shower A. M. do.
25	—·12	—·00	—·00	80	85	85	6	W.	S. E.	Clear A. M. flying clouds.
26	—·10	—·05	—·05	82	85	85	—	W.	S. E.	Clear do. do.
27	—·10	—·10	—·10	83	85	85	—	W.	S. E.	Clear do.
28	—·10	—·10	—·10	82	85	85	—	W.	S. E.	Clear do.
29	—·10	—·10	—·10	82	85	85	—	W.	S. E.	Clear do.
30	—·10	—·10	—·10	81	85	85	—	W.	S. E.	Clear do.
31	—·05	—·10	—·10	81	85	85	—	W.	S. E.	Clear do.

Barometer.	Thermometer.	
Inches.	°	In. 20ths
Mean maximum....30·07	Mean maximum..86·41	Amount of rain.... 6
Mean minimum......30·06	Mean minimum...80·61	Number of days on which rain has fallen during the month 2
General mean........30·06	General mean....84·00	Prevailing winds. A. M. W. 17 S. W. 5 S. 5 Var. 1.
Height from ground floor of the Dispensary 2 feet 7¾ inches.	Mean daily range. 5·58	Prevailing winds. P. M. S. 19 S. E. 11 E. 1.

The above observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN JUNE, 1812.

Days.	Barometer inches.			Thermometer degrees.			Pluviometer inches from noon to noon.	Wind.		WEATHER.
	Sunrise.	12 to 2 P. M.	Sunset.	Sunrise.	12 to 2 P. M.	Sunset.		A. M.	P. M.	
1	29·75	29·77	29·77	88	95	97	None indicated during the month.	W.	W.	Hazy A. M. gusts of land wind and unpleasant day.
2	—·78	—·75	—·70	88	96	95		W.	W.	Hazy do. oppressive day and overpoweringly hot.
3	—·80	—·75	—·70	88	91	95		W.	ES & W.	Hazy do. sea breeze at noon only for half an hour, the land wind then returned, oppressively. Hurricane at Calcutta.
4	—·80	—·80	—·75	88	96	90		W.	S. S. E.	Hazy A. M. sea breeze at 4 P. M.
5	—·80	—·85	—·80	88	91	88		W.	S. E.	Clear do. day pleasanter, blowing rather fresh from the southward. shower last night.
6	—·85	—·85	—·85	85	90	88		S.	S. E.	Clear do.
7	—·90	—·90	—·90	88	90	88		S.	S. E.	Clear do. rather sultry day.
8	—·90	—·90	—·90	86	95	88		W.	S. E.	Clear do. sea breeze.
9	—·90	—·90	—·90	86	91	87		W.	S. E.	Clear do. do.
10	—·95	—·90	—·90	87	91	87		W.	S. E.	Clear do.
11	30·00	30·00	30·00	86	91	87		W.	S. E.	Clear do. sea breeze, shower last night.
12	—·00	—·00	—·00	86	91	86		W.	S. E.	Clear do. sky overcast in afternoon and looked threatening, wind from N. W. thunder and lightning.
13	—·00	29·95	—·95	84	90	86		W.	S. E.	Hazy do. cloudy P. M. lightning last night.
14	—·00	—·95	—·95	84	90	86		W.	S. E.	Clear do. sea breeze.
15	29·95	—·95	—·95	85	94	86		W.	S. E.	Clear do. do. shower last night.
16	—·95	—·95	—·90	85	87	86		W.	N. W.	Clear do. cloudy forenoon, slight shower, winds variable.
17	—·85	—·85	—·85	84	90	86		W.	S. E.	Cloudy do. drizzling in the day sultry and hazy.
18	—·90	—·90	—·85	85	92	88		W.	W.	Cloudy do. sultry day.
19	—·85	—·85	—·85	87	93	88		W.	W.	Clear do. slight shower about 6¾ P. M.
20	—·85	—·75	—·75	88	93	88		W.	W.	Clear do. winds variable.
21	—·90	—·90	—·85	88	93	90		W.	S. E.	Clear do. sea breeze, shower at 6¾ P. M.
22	—·95	—·90	—·85	88	94	90		W.	S. E.	Clear do. do. oppressive night.
23	—·90	—·90	—·85	89	94	90		W.	S. E.	Clear do. do.
24	—·85	—·85	—·85	87	95	90		W.	S. E.	Clear do. do. shower last night.
25	—·85	—·85	—·85	85	88	88		W.	S. E.	Clear and pleasant A. M. sea breeze.
26	—·90	—·90	—·85	87	90	88		W.	S. E.	Clear A. M. sea breeze.
27	—·90	—·87	—·85	85	90	88		W.	S. E.	Clear do. do. lightning during the night.
28	—·99	—·90	—·85	85	90	88		W.	S. E.	Clear do. do.
29	—·95	—·90	—·90	87	87	88		W.	S. E.	Clear do. do. lightning last night.
30	—·95	—·90	—·90	86	88	88		W.	S. E.	Clear do.

Amount of rain.... In. 20ths, 0 00

Number of days on which rain has fallen during the month. 8

Prevailing winds. A. M. W. 29 S. 2. P. M. S. Ey. 23 W. 5 N. W. 1, var. 1.

Thermometer. °
Mean maximum....91·53
Mean minimum....86·43
General mean.......88·85
Mean daily range.. 5·33

Barometer. Inches.
Mean maximum...29·89
Mean minimum....29·86
General mean......29·87
Height from ground floor of the Dispensary 2 feet 7¼ inches.

The above Observations were kept at the Fort Dispensary.

Statistical Table for Nellore and Ongole for the year 1837.

No.	TALOOKS.	Population.			Total number of villages, &c.				Cattle.					Governemnt dry Land.			Enam dry Land.		
		Women.	Men.	Total.	Villages.	Hamlets.	Houses.	Ploughs.	Cows.	Bullocks.	Female Buffaloes.	Male Buffaloes.	Sheep and Goats.	Cultivated Land.	Waste Land.	Extent of land capable of being cultivated.	Cultivated Land.	Waste Land.	Extent of land capable of being cultivated.
														Goorootoos.	Goorootoos.	Goorootoos.	Goorootoos.	Goorootoos.	Goorootoos.
1	Survapully	10,776	11,430	22,206	42	42	4,315	1,603	18,611	3,095	3,485	2,852	17,390	* 2,887	1,974	4,862	488	52[illegible]	1,017
2	Cottah	5,572	5,991	11,563	30	57	2,477	973	6,705	2,869	1,530	674	6,152	465	931	1,397	135	185	320
3	Nellore	24,384	25,125	49,509	54	18	9,975	2,808	21,710	8,369	5,209	2,960	11,800	1,554	1,266	2,920	447	1,046	1,491
4	Talamunchy	12,448	14,252	26,700	45	24	4,833	2,922	14,142	5,135	3,611	2,856	10,465	430	2,898	3,329	68	101	170
5	Sungum	11,315	12,605	23,920	35	14	4,778	1,633	10,146	4,259	4,304	3,119	21,678	3,913	206	4,119	701	565	1,267
6	Cauvaly	6,228	6,553	12,781	26	40	3,355	961	9,468	1,666	2,411	1,428	19,514	1,515	2,825	4,341	442	1,767	2,210
7	Toomunaltapoor	4,609	4,864	9,473	19	27	1,991	1,080	7,187	3,747	3,376	132	34,185	4,203	3,820	8,024	1,110	710	1,821
8	Goondavole	2,846	3,236	6,082	24	7	1,246	537	4,530	1,599	2,246	176	16,962	1,433	5,892	7,326	419	319	73
9	Ravoor Vareegoontapaud	15,736	15,071	30,807	62	37	5,821	2,480	7,998	5,917	6,805	1,600	47,236	6,871	6,643	13,515	1,512	1,072	2,615
10	Calegherry Doottaloor	8,308	9,340	17,648	39	45	2,978	1,450	5,957	3,788	3,362	302	34,993	4,581	2,300	6,881	2,370	1,688	4,053
11	Buddapoody	8,134	8,616	16,750	40	26	4,588	1,656	6,054	3,270	2,349	1,312	19,120	3,208	3,983	7,191	1,433	2,024	3,458
12	Dauvagoodoor Patchoovah	9,537	10,520	20,057	76	63	3,534	2,756	8,216	6,292	5,032	500	39,397	11,452	10,208	21,660	4,185	2,900	7,086
13	Ongole	14,164	17,502	31,666	37	41	6,876	2,506	9,714	5,784	6,713	1,138	28,445	8,677	5,673	14,351	5,332	3,697	9,029
14	Enamanamellore	7,459	8,404	15,863	39	31	2,631	1,925	5,815	4,107	3,551	667	11,830	6,762	5,509	12,272	4,401	3,455	7,857
15	Chendalore	10,049	11,274	21,323	43	29	5,783	1,399	5,630	3,003	5,134	840	23,333	6,715	11,117	17,833	2,975	3,593	6,568

The above information has not with exception of the number of villages for some places been obtained for the following Talooks.

No.	Talooks	Villages
16	Shrotriums	245
17	Vencatagherry Zemindary	971
18	Sydapoor do.	115
19	Woodiagherry Jaghire	68
20	Choondy Zemindary	44
21	Mectlealpaud Zemindary	3
22	Woortavar Polliam	4
23	Chittalevar Polliam	3
24	Toonavar do.	4
25	Tandiboyanavar do.	3
26	Nuzzers and Reessooms	0
27	Stalla curnums do.	0
28	Quit Rent	0

* 1,35,000 square feet of land.

Statistical Table for Guntoor and Paulnaud for the year 1837.

	Number.	TALOOKS.	Population. Men.	Population. Women.	Population. Total of Inhabitants.	Houses.	Cattle. Cows.	Cattle. Bullocks.	Cattle. Female Buffaloes.	Cattle. Male Buffaloes.	Cattle. Sheep and Goats.	Total number of Ploughs.	Total assessed lands under rent. Quantity of Land.	Total assessed lands & on those under management. Quantity of Land.
													Acres.	Acres.
Aumanie Estates.	1	Tungadah Purganah	5,369	5,387	10,756	3,897	2,846	3,112	1,420	569	17,354	1,403	16,995	17,746
	2	Carempoody do.	2,965	2,839	5,804	2,291	1,120	1,811	1,072	261	5,649	882	9,081	9,420
	3	Timmercottah do.	1,546	1,517	3,063	1,381	1,005	978	568	97	6,758	478	4,868	5,025
	4	Goorjalah do.	5,137	5,013	10,150	3,975	2,259	3,182	1,618	441	14,278	1,745	16,744	18,855
	5	Mauherlah do.	7,683	7,454	15,137	10,231	4,123	4,338	2,398	508	20,580	3,038	27,344	28,284
Zemindary Estates.	1	Raypully District	8,548	7,307	15,855	4,325	2,711	4,606	2,193	658	10,446	2,571	0	0
	2	Chilcaloorpaud do.	11,473	9,754	21,227	7,580	4,354	5,454	3,206	1,388	20,609	2,905	0	0
	3	Suttanaputty do.	11,140	9,775	20,915	7,124	4,667	5,070	2,975	1,172	21,148	2,435	0	0
	4	Innacondah and Bellumcondah Purganahs.	19,582	18,170	37,752	14,866	12,027	9,630	7,074	1,606	81,369	3,632	0	0
	5	Gurkepaud, &c. villages	60	60	120	33	33	22	26	3	879	10	0	0
	6	Chintapully District	34,693	28,574	63,257	21,009	13,331	14,526	8,479	2,026	72,057	6,733	0	0
	7	Canamalachervoo	22	17	39	9	0	4	4	2	292	2	0	0
Estates purchased by the proprietors in public Auction.	1	Ranchoor District	9,248	7,781	17,029	5,287	4,535	4,880	3,077	918	12,234	2,791	0	0
	2	Colloor villages	1,621	1,289	2,910	984	370	835	319	57	674	442	0	0
	3	Nezampatam Sirkar	13,168	11,475	24,643	7,682	5,609	2,193	2,741	2,361	31,933	2,008	0	0
	4	Vunghepoorum Mootta	3,186	2,757	5,943	2,211	1,525	2,051	948	289	3,461	1,058	0	0
	5	Bundaroopully	146	146	292	34	29	51	24	9	106	30	0	0
Jaghire.	1	Inavole of Jaghire village	5	5	10	2	2	12	0	0	0	6	0	0

Statistical Table for the Northern Division of Arcot for the year 1837.

No.	NAMES OF THE TALOOKS.	Population.			Villages.	Hamlets.	Houses.	Ryots.	Ploughs.	Cattle, &c.					Cultivation,	
		Men.	Women.	Total.						Cows.	Bullocks.	Buffaloes.	Black Cattle.	Sheep.	Stulls. Cawnies.	Cawnies.
	Stamp Revenue in the Revenue Judicial Department.															
1	Chittoor........	21,969	10,951	41,920	86	328	7,925	9,474	5,966	16,685	11,810	1,052	780	20,491	14,780	15,032
2	Tirputty........	10,132	10,020	20,152	18	34	6,650	3,091	1,913	2,875	3,920	1,316	972	5,723	1,347	1,700
3	Cauverypauk........	24,955	23,864	48,819	139	34	9,278	7,963	4,601	5,952	8,527	2,529	2,592	9,964	7,229	7,670
4	Sholinghur......	14,647	13,728	28,375	102	87	4,966	4,959	4,168	6,752	7,501	1,804	1,814	17,312	10,248	12,693
5	Trivullum........	16,867	15,758	32,625	119	172	6,349	5,636	4,639	8,205	7,659	2,342	1,729	19,430	12,888	11,345
6	Satghur..........	22,220	20,578	42,798	190	129	8,608	6,600	4,928	13,252	8,882	3,299	3,226	1,567	10,503	19,803
7	Cuddapanuttum......	10,980	20,187	21,167	293	70	5,148	3,810	2,745	12,887	7,734	1,076	271	16,237	5,528	17,703
8	Arcot....	26,462	27,012	53,474	131	41	10,042	5,544	3,672	5,921	7,841	2,824	2,827	15,391	13,184	0,540
9	Vellore......	36,311	35,754	72,065	180	117	14,882	10,314	4,948	12,512	9,536	5,806	2,724	22,254	18,096	4,125
10	Trivuttoor........	20,934	20,102	41,036	265	4	8,382	6,144	4,888	7,300	7,165	3,051	3,200	18,267	12,957	29,887
11	Poloor........	15,707	16,564	32,271	183	63	6,061	5,621	3,212	8,321	4,629	2,633	1,843	14,228	11,622	10,941
12	Wundirwash......	15,417	14,803	30,225	219	5	5,309	4,153	3,472	6,702	5,418	3,224	2,347	18,811	11,963	11,256
13	Sutiwaid..........	12,052	11,030	23,082	104	85	4,089	4,051	2,834	7,494	7,170	1,470	1,421	16,461	4,499	4,669
14	Penmurry.........	11,927	11,097	23,024	255	74	4,762	5,203	3,071	8,750	6,766	1,132	451	9,129	4,263	4,028
	Peishcush.	*	*	*			*	*	*	*	*	*	*	*	*	*
15	Calastry Zemindaree........				644	210										
16	Cavattee Nuggur do....				498	155										
17	Avelcondah Jaghire........				28	18										
18	Arnee do......				166	9										
19	Goodepaute Polliam....				42	3										
20	Nargentee do.				62	18										
21	Poolecherlah do.				38	71										
22	Kulloor do.				8	87										
23	Bunganree do.				94	86										
24	Toombah do.				4	32										
95	Coongoondy Polliam Thasildary........				316	69										
26	Vencutgherry Cottah........	4,633	4,321	8,954	183	29	2,989	2,017	1,306	4,772	3,428	177	188	5,663	2,114	3,715

* Information not given.

Statistical Table for the Southern Division of Arcot and Cuddalore for the year 1837.

No.	NAMES OF THE TALOOKS.	Soils.								Totacal or Garden land irrigated by Wells.		Means of Irrigation by								Houses.	Population.		
		Black.		Sandy.		Red.		Total.				Tanks.		Channels.		Annicuts or dams.		Wells.					
		Land.		Land.		Land.		Land.		Land.		In Repair.	Out of Repair.	In Repair.	Out of Repair.	In Repair.	Out of Repair.	In Repair.	Out of Repair.		Men.	Women.	Total.
		Cawnies	As.	Cawnies	As.	Cawnies	As.	Cawnies	As.	Cawnies	As.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1	Tindevanum......	6,041	1¾	16,514	0½	286	3	22,841	5¼	125	12¼	268	72	5	6	3	6	649	461	7,530	19,010	17,625	36,635
2	Trevandy.........	275	¾	17,623	7¾	6,596	13½	24,495	5¾	88	13⅛	91	16	102	35	2	0	496	34	8,728	24,742	22,550	47,292
3	Villapooram......	1,733	15¾	31,609	3 0	1,063	7½	34,406	10¼	160	8	234	76	74	38	15	7	687	146	12,788	37,202	33,285	70,487
4	Bowangherry.....	7,259	13½	13,211	11¼	1,050	11¾	21,522	4½	52	5¼	104	28	118	30	3	0	39	5	6,516	17,147	15,177	32,294
5	Manuargoody	579	5¼	1,001	14½	5,149	0½	6,730	4¼	65	4¼	82	6	198	8	4	0	68	9	3,309	8,011	7,617	15,628
6	Chedumbaram....	4,447	14¾	3,514	7¼	2,861	2	10,823	8	20	0¼	68	28	61	21	0	0	65	21	4,837	11,583	10,620	22,203
7	Tervamallie.......	0	0	19,461	6¼	520	11¼	19,982	1½	79	0	283	216	59	55	20	48	1,424	305	4,755	11,667	10,568	22,235
8	Verdachellum....	14,717	13	21,322	5¼	1,875	6½	37,915	8¾	150	13	175	80	50	20	11	10	924	321	11,422	30,950	27,450	58,400
9	Eelevana, soore..	1,059	6¾	15,714	14¾	90	5½	16,864	11	95	0⅜	217	61	45	35	2	3	1,142	657	7,529	18,710	16,988	35,698
10	Tecullore.........	0	0	12,778	13¼	23	15	12,802	12¼	78	13¾	276	117	30	9	10	6	1,118	789	6,525	17,076	16,144	33,220
11	Cullacoorchey.. ..	2,418	10¼	13,425	5½	15	11½	15,859	11¼	159	6	221	102	85	30	62	13	1,762	834	7,450	20,822	18,051	38,873
12	Chaitput.........	3	1⅛	18,972	5¼	2	14	18,978	4¾	117	5¼	421	242	10	19	9	9	2,388	1,592	7,184	19,337	18,593	37,930
	Total....	38,536	3	1,85,149	14½	19,536	6	2,43,222	7½	1,193	1½	2,473	1,044	837	306	141	102	10,762	5,174	88,573	2,36,227	2,14,668	4,50,895
13	Cuddalore........	52	9¾	2,074	4¾	0	0	2,126	14½	2	15½	6	1	8	1	1	0	24	11	6,130	16,937	17,5 2	34,519
	Grand Total....	38,588	12¾	1,87,224	3¼	19,536	6	2,45,349	6	1,196	1	2,479	1,045	845	307	142	102	10,786	5,185	94,703	2,53,164	2,32,250	4,85,414

Statistical Table for the Southern Division of Arcot and Cuddalore, for the year 1837, Continued.

No.	Names of the Talooks.	Cattle. Bullocks. No.	Cattle. Buffaloes. No.	Cattle. Sheep. No.	Cattle. Total. No.	Taxes on Sundry Trees. Tamarind Trees. No.	C. Rs	A	P	Mango Trees. No.	C. Rs	A	P
1	Tindevanum......	26,175	10,115	20,669	56,959	3,371	737	6	6	1,293	141	6	10
2	Trevandy........	16,365	5,017	11,493	32,875	863	183	3	3	1,010	110	9	3
3	Villapooram.......	33,089	10,669	23,083	66,841	2,550	564	5	9	2,013	220	2	5
4	Bowangherry.....	12,803	4,472	11,192	28,467	2,116	462	14	0	1,020	111	9	1
5	Manuargoody.....	6,325	3,000	3,440	12,765	701	153	11	10	130	14	3	6
6	Chedumbaram....	9,698	3,088	3,616	16,402	1,696	371	2	0	490	54	2	3
7	Trevamallie......	32,107	7,220	25,004	64,331	1,637	361	10	4	375	41	0	3
8	Verdachellum....	22,510	6,520	69,730	98,760	3,117	681	13	6	1,396	152	11	0
9	Eelevana, soore...	14,687	6,878	22,057	43,622	1,848	404	4	0	727	79	8	3
10	Tecullore...	18,321	7,085	22,078	47,484	2,163	473	2	6	514	56	3	6
11	Cullacoorchey....	15,395	6,309	45,740	67,444	1,063	228	14	9	340	37	3	0
12	Chaitput.........	28,858	9,227	32,845	70,930	1,744	381	8	0	571	62	7	3
	Total....	2,36,333	79,600	2,90,947	6,06,880	22,899	5,004	0	5	9,879	1,081	2	7
13	Cuddalore........	4,082	964	2,599	7,645	146	62	2	0	11	1	3	3
	Grand Total....	2,40,415	80,564	2,93,546	6,14,525	23,045	5,066	2	5	9,890	1082	5	10

No.	Names of the Talooks.	* Illapale Trees. No.	C. Rs	A	P	Jack Trees. No.	R.	A	P	Cocoanut Trees. No.	C. R.	A	P
1	Tindevanum......	1,781	194	12	8	26	5	11	0	2,594	283	11	2
2	Trevandy........	1,997	233	5	0	648	157	8	10	2,626	287	3	0
3	Villapooram.......	2,435	266	5	5	13	2	13	6	2,197	240	5	11
4	Bowangherry.....	733	80	6	4	498	108	15	0	314	34	5	6
5	Manuargoody.....	648	70	14	11	11	2	6	6	807	88	4	3
6	Chedumbaram....	2,151	235	2	4	1	0	3	6	1,045	114	4	9
7	Trevamallie......	297	32	7	11	0	0	0	0	46	5	2	3
8	Verdachellum....	1,717	187	13	3	357	78	1	6	580	63	7	0
9	Eelevana, soore...	971	106	6	9	12	2	10	0	64	7	0	1
10	Tecullore...	777	84	15	9	1	0	3	6	197	21	8	9
11	Cullacoorchey....	408	55	1	6	0	0	0	0	434	47	7	6
12	Chaitput.........	660	74	4	2	0	0	0	0	89	9	11	9
	Total....	14,575	1,622	0	0	1,567	358	9	4	10,993	1,202	7	11
13	Cuddalore........	95	19	0	6	0	0	0	0	382	83	9	0
	Grand Total....	14,670	1,641	0	6	1,567	338	9	4	11,375	1,286	0	11

No.	Names of the Talooks.	Palmyrah Trees. No.	C. R.	A	P	Date Trees. No.	C. R	A	P	Total. No.	C. Rs.	A	P
1	Tindevanum......	1,186	92	5	0	0	0	0	0	10,251	1,455	5	2
2	Trevandy........	1,940	80	15	0	510	39	11	1	8,694	1,072	7	5
3	Villapooram.......	2,374	184	11	4	589	45	12	6	12,201	1,524	8	10
4	Bowangherry.....	12,335	959	13	5	0	0	0	0	17,016	1,757	15	4
5	Manuargoody.....	0	0	0	0	0	0	0	0	2,297	329	9	0
6	Chedumbaram....	1,179	57	1	7	0	0	0	0	6,562	832	0	5
7	Trevamallie......	3,309	257	8	8	584	45	6	11	6,218	743	4	4
8	Verdachellum....	0	0	0	0	0	0	0	0	7,167	1,163	14	8
9	Eelevana, soore...	20	1	9	0	396	30	13	0	4,038	682	3	1
10	Tecullore...	1,422	110	10	2	550	42	12	2	5,624	789	8	4
11	Cullacoorchey....	195	15	2	9	34	4	3	6	2,491	388	1	0
12	Chaitput.........	3,474	270	7	8	50	8	14	3	6,588	802	5	1
	Total....	26,534	2,030	4	7	2,733	212	9	5	89,180	11,491	2	3
13	Cuddalore........	196	19	4	0	20	3	0	0	850	188	2	9
	Grand Total....	26,730	2,049	8	7	2,753	215	9	5	90,030	11,679	5	0

* Bassia longi folia, or oil nut tree.

Statistical Table for the Zillah of Chingleput, for the year 1837.

No.	NAMES OF THE TALOOKS.	Villages and Hamlets.	Ploughs.	Population.			Houses.	Cattle and Sheep.					Extent of land cultivated.	Sources of Irrigation.											
														Tanks.		Spring Channels.		River Channels		Wells large and small & Ponds.		Annicuts		Sluices.	
				Male.	Female.	Total.		Bullocks.	Cows.	Male Buffaloes.	Female Buffaloes.	Sheep and Goats.	Cawnies.	In repair.	Out of repair	In repair.	Out of repair.	In repair.	Out of repair.	In repair.	Out of repair.	In repair.	Out of repair.	In repair.	Out of repair.
1	Caraugooly																								
2	Ootramaloor																								
3	Conjeveram																								
4	Chingleput	2,300	21,791	1,74,471	1,61,924	3,36,395	66,609	96,530	1.00,683	16,626	26,281	78,520	71,661	2,295	627	256	110	141	51	4,912	2,848	46	3	95	30
5	Manimungalum																								
6	Terooporoor																								
7	Sydapet																								

Meteorological Observations, made at Trichinopoly, in 1841 and 1842.

	Barometer.			Thermometer.				Amount of rain.	Number of days on which rain has fallen.	Prevailing Winds.	
	Mean Maxim.	Mean Minim.	General Mean.	Mean Maxim.	Mean Minim.	General Mean.	Mean daily range.	Inches.	Days.	A. M.	P. M.
January 1841	29 ·75	29 ·71	29 ·73	81	73 ·3	77 ·1	7 ·7	½	2	N. E.	N. E.
February ,,	29 ·75	29 ·70	29 ·75	82	74 ·6	78 ·3	7 ·4	0	1	N. E. & E. by S.	N. E. & E. by S.
March ,,	29 ·73	29 ·58	29 ·65	89	81	85	8	1-20th	2	S. E.	S. E. by N. W.
April ,,	29 ·64	29 ·59	29 ·62	91 ·3	85 ·3	88 ·3	6	1-5th	3	S. E.	S. E.
May ,,	29 ·56	29 ·52	29 ·54	92	81	86 ·5	11	3-23rd	10	Westerly & N. W.	Westerly by S. E.
June ,,	29 ·56	29 ·52	29 ·54	93 ·6	85 ·6	88 ·6	8	1-10th	5	Westerly	Westerly
July ,,	29 ·67	29 ·43	29 ·53	87	80 ·6	83 ·8	6 ·4	¾	1	N. W.	N. W.
August ,,	29 ·75	29 ·68	29 ·72	89 ·6	83 ·6	86 ·6	6	8¼	8	S. W.	S. W.
September ,,	*0	0	0	90 ·5	82 ·5	86 ·5	8	4	13	S. W.	S. W.
October ,,	0	0	0	91	79 ·3	85 ·1	11 ·7	11	14	N. E.	N. E.
November ,,	0	0	0	85 ·6	79	82 ·3	6 ·6	4-5th	6	N. E.	N. E.
December ,,	0	0	0	87 ·6	80	83 ·8	7 ·6	0	0	N. E.	N. E.
January 1842	0	0	0	85	73	79 ·1	8	5 16-20th	5	N. E.	N. E.
February ,,	0	0	0	90 ·6	74 ·6	87 ·6	16	0	0	N. E.	S. W.
March ,,	0	0	0	0	0	0		0	0		
April ,,	0	0	0	0	0	0		0	0		
May ,,	0	0	0	94 ·3	87 ·3	90 ·8	7	0	2	S. S. E.	S. S. W.
June ,,	0	0	0	93 ·6	88 ·3	90 ·8	5 ·3	1½	8	S. S. E.	S. S. W.
July ,,	0	0	0	88	86	87	2	1	5	S. S. E.	S. S. W.
August ,,	0	0	0	92	84 ·6	88 ·4	7 ·7	1	6	S. S. E.	S. S. W.
September ,,	0	0	0	92	80 ·6	86 ·3	11 ·4	11¼	16	N. E.	S. S. E.
October ,,	0	0	0	92	80 ·3	86 ·1	11 ·7	6¾	12	N. E.	S. S. E.
November ,,	0	0	0	84	77 ·6	80 ·8	6 ·4	3¾	14	N. E.	S. S. E.
December ,,	0	0	0	85	78 ·3	81 ·6	6 ·7	½	3	N. E.	S. S. E.

* Observations not taken during the remaining months, on account of the Barometer being out of repair.

Statistical Table for the Collectorate of Salem for the year 1837.

Number and Names of the Talook's.	No. of Ploughs.	Numer of ryots holding Puttah. Total. Number of Ryots.	Number of Puttahs.	Total of the four descriptions of land viz. Dry, Wet, Pasture and Garden. Acres	Gs.	As.	Total of Wet Land. Acres.	Gs.	As.
1 Ahtoor	2,203	12,042	11,255	30,428	13	15	3,001	18	7
2 Namcul	4,441	18,553	16,420	21,013	11	15	2,699	5	5
3 Paramutty	2,921	9,014	7,726	27,043	12	0	2,019	8	7
4 Salem	4,284	13,424	13,403	40,604	31	14	3,503	23	15
5 Shenkerrydroog	3,380	9,421	7.750	40,597	18	9	1,286	11	8
6 Raizepoor	2,717	10,266	8,066	32,284	12	5	3,298	16	9
7 Womaloor	3,850	11,678	9,875	64,308	30	9	2.411	2	4
8 Trichengrode	4,142	11,980	10,150	27,580	0	6	1,832	12	14
9 Darumpoory	5,170	19,078	16,594	83,747	31	4	6,997	17	3
10 Tengracottah	4,589	12,950	12,180	63,582	24	14	2,154	13	5
11 Kistnagherry	4,171	12,268	11,023	53,099	37	5	4,847	36	13
12 Trepatoor	4,619	8.515	8,097	36,310	22	12	3,519	34	1
13 Denkencottah	2,790	10,946	9,716	57,464	15	7	3,039	14	5
14 Ossoor	898	4,611	3,990	21,856	30	6	1,712	26	6
15 Mullapaddy	489	1.399	1,225	10,712	6	6	427	7	15
16 Giddagaviel of Senkerrydroog	0	0	0	6,062	25	0	11	33	10
17 ,, of Nameul	0	0	0	101	27	6	5	22	2
Total	50,664	1,66,145	1,47,470	6,16,805	32	5	4,2767	25	1

Table exhibiting the number of admissions and deaths, in the detachment of native troops stationed at Salem, from 1829 to 1838 inclusive.

CLASSES	DISEASES.	From 1829 to 1838 Aggregate strength 2440. 1st Half. Ad.	1st Half. Dd.	2nd Half. Ad.	2nd Half. Dd.	Admissions & deaths from each class of diseases 1st Half. Ad.	1st Half. Dd.	2nd Half. Ad.	2nd Half. Dd.	Total admissions from each class	Total Deaths. from each class.	Percentage of sick to strength.	Percentage of Deaths to sick.
Fevers......	Febris ephemera	4	0	9	0								
	,, intermit quot.	81	2	110	3	87	2	110	3	197	5	8 ·073	3 ·533
	,, remittens.....	2	0	0	●								
	Cholera........	20	13	15	7	20	13	15	7	35	20	1 ·434	57 ·142
Diseases of the Abdominal viscera......	Diarrhœa......	15	1	21	1								
	Dysenteria acuta et chronica.	4	0	7	*1	33	1	42	2	75	3	3 ·073	4 ·000
	Dyspepsia......	10	0	10	0								
	Obstipatio......	3	0	3	0								
	Hæmorrhois,...	1	0	1	0								
	Hepatitis......	1	0	1	1	1	0	1	1	2	1	0 ·081	50 ·000
Diseases of the Lungs.	Catarrhus......	0	0	3									
	Asthma....	3	3	10	0								
	Phthisis pulmonalis.........	1	0	2	2	6	3	17	2	23	5	0 ·942	21 ·739
	Pneumonia.....	2	0	2	0								
Diseases of the Brain.	Apoplexia......	2	2	3	3								
	Paralysis......	2	1	3	0	4	3	9	3	13	6	0 ·532	46 ·153
	Mania..........	0	0	3	0								
Eruptive fevers......	Variola.........	0	0	0	0	3	0	2	0	5	0	0 .205	0 ·000
	Varicella.......	3	0	2	0								
Dropsy.. ..	Anasarca.......	2	1	9	2	2	1	9	2	11	3	0 ·450	27 ·272
Rheumatic affections.	Rheumat. acutus et chronicus.	38	0	45	3	38	0	45	3	83	3	3 ·401	3 ·614
Venereal affections....	Syphilis primitiva......... ..	1	0	10	0								
	,, consecutiva..	0	0	1	0								
	Gonorrhœa,l....	5	0	6	0	6	0	20	0	26	0	1 ·064	0 ·000
	Hernia humoralis............	0	0	3	0								
Specific diseases......	Atrophia.......	2	1	0	0								
	Dracunculus....	7	0	7	0								
	Beriberi........	*24	17	0	0	33	18	7	0	40	18	1 ·631	45 ·000
	Scrophula......	0	0	0	0								
Diseases of the eye...	Morbi Oculorum...........	9	0	17	0	9	0	17	0	26	0	1 ·064	0 ·000
Do. skin.	Morbi Cutis....	10	0	8	0	10	0	8	0	18	0	0 ·737	0 ·000
	Other diseases...	132	0	114	0	132	0	114	0	†246	0	10 ·082	0 ·000
	Total..	384	41	416	23	384	41	416	23	800	64	32 ·786	8 ·000

* All these cases were admitted prior to 1832.

† Of this number 128 were cases of ulcer.

Statistical Table for the Collectorate of Coimbatore for the year 1837.

	Names of the Talooks.	Number of Villages.	Number of Hamlets.	Total.	Total number of Ryots.	Number of Ploughs.	Number of Houses.	Population.			Cattle.						Dry Land.		Garden Land		Wet Land.	
								Male.	Female.	Total.	Cows.	Bullocks.	Female Buffaloes.	Male Buffaloes.	Sheep.	Total.	Bullhas.		Bullahs.		Cawnies.	
1	Coimbatore	172	218	390	8, 670	4, 786	29, 279	46, 213	47, 570	93, 783	13. 950	15, 180	5, 140	1, 235	28, 185	63, 690	11, 719	1¾	2, 938	10¾	1, 574	15
2	Sattimungalum	141	434	575	10, 932	5, 328	23, 394	29, 944	29, 780	59, 724	32, 298	31, 338	14, 458	3, 430	26, 242	1,07,766	13, 830	5¼	1, 926	2¾	6, 736	13½
3	Denaickencottah	213	271	484	5, 551	3, 120	11, 499	15, 361	15, 528	30, 889	15, 350	11, 307	2, 509	925	25, 222	55, 313	5, 456	6¼	861	6¾	513	13¾
4	Colligal	146	305	451	10, 878	4, 865	10, 242	23, 367	22, 266	45, 633	20, 538	11, 266	6, 261	2, 125	22, 396	62, 586	11, 594	14¾	439	¼	2, 677	3¼
5	Pullachy	127	154	281	4, 885	3, 861	17, 575	26, 168	27, 303	53, 471	19, 168	18, 315	6, 739	1. 812	13. 631	59, 665	25. 017	6	1, 295	11½	2, 678	11¾
6	Perindoray	147	402	549	10, 116	6, 892	22, 917	28, 750	29, 200	57, 950	16, 182	15, 361	3, 276	515	32, 213	68, 547	15, 358	15¾	3, 347	7¼	146	14½
7	Andioor	68	302	370	6, 146	2, 944	10, 731	14, 641	15, 097	29, 738	11, 196	6, 315	1, 308	217	11, 645	30, 681	11, 863	8¼	613	6¼	65	3¾
8	Errode	63	194	257	7, 883	5, 843	10, 007	19, 493	19, 269	38, 762	7, 188	6, 413	2, 290	655	15, 018	31, 564	12, 761	12	1, 859	5¾	4, 935	1
9	Dharapooram	41	325	366	4, 619	3, 359	11, 880	25, 092	24, 748	49, 840	7, 995	7, 168	2, 480	669	19, 168	37, 480	2, 720	5¼	1, 066	15	3, 863	12½
10	Kongyen	42	298	340	5, 918	5, 692	18, 148	29, 339	28, 098	57, 437	16, 393	14, 463	2, 455	804	37, 470	71, 585	8, 727	7¾	1, 799	14¼	83	2½
11	Caroor	79	612	691	8, 491	5, 774	22, 060	36, 975	36, 421	73, 396	26, 092	16, 103	5, 091	2, 608	41, 588	91, 482	13, 383	10¼	1, 148	13¾	5, 136	4¾
12	Cheyoor	105	300	405	6, 228	4, 548	14, 358	21, 641	21, 682	43, 323	10, 554	11, 937	3, 475	401	13, 845	40, 213	7, 269	5¾	2. 901	14¾	371	3¾
13	Pulladum	89	317	406	9, 492	6, 409	22, 799	41, 695	42, 895	84, 590	39, 766	33, 532	13, 315	2, 561	59, 315	1,48,489	16, 876	15½	4, 563	5½	557	13½
14	Chuckragherry	87	149	236	6, 131	5, 343	21, 388	30, 635	31, 120	61, 755	12, 133	15, 488	4, 676	1, 170	14, 735	48, 202	15, 039	1	2, 110	10	2, 578	15
	Poligars Peishcush Villages.	0	0	0	0	0	6, 357	9, 799	10, 181	19, 980	7, 335	6, 415	3, 208	384	2, 996	20, 338	0	0	0	0	0	0
	Total	1,520	4,281	5,801	1, 05.940	68, 764	2, 52,634	3, 99,113	4, 01,158	8, 00,271	2, 56,138	2, 20,601	76,681	19, 511	3,64,669	9,37,600	1, 71,612	3¾	26, 872	12¼	31, 920	½

COIMBATORE.

Table exhibiting the number of admissions and deaths, in the detachment of native troops stationed at Coimbatore, during a period of seven years, from 1832 *to* 1838 *inclusive.*

CLASSES	DISEASES.	From 1832 to 1838. inclusive. Aggregate strength 878. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions & deaths from each class of disease. 1st Half. Ad.	Dd.	2nd Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Average per centage of sick to strength.	Average per centage of deaths to sick treated.
Fevers......	Febris intermit quot.........	77	3	86	0	104	3	116	0	220	3	25 ·056	1 ·363
	,, com. continua.........	27	0	30	0								
	Cholera........	8	2	1	0	8	2	1	0	9	2	1 ·024	22 ·222
Diseases of the Abdominal viscera.	Diarrhœa..... ..	15	1	37	1	16	1	40	1	56	2	6 ·378	3 ·571
	Dysenteria acuta............	0	0	3	0								
	Dyspepsia...,...	1	0	0	0								
	Hepatitis acuta et chronica...	0	0	2	0	0	0	2	0	2	0	0 ·227	0 ·000
Diseases of the Lungs.	Asthma........	1	0	1	0	2	0	2	1	4	1	0 ·455	25 ·000
	Phthisis pulmonalis..........	0	0	0	0								
	Pneumonia	1	0	0	0								
	Dyspnœa.......	0	0	1	1								
Diseases of the Brain.	Apoplexia......	0	0	0	0	0	0	1	0	1	0	0 ·113	0 ·000
	Epilepsia.......	0	0	1	0								
	Paralysis.......	0	0	0	0								
	Mania..........	0	0	0	0								
Eruptive Fevers......	Variola.........	1	0	0	0	5	0	1	0	6	0	0 ·683	0 ·000
	Varicella.......	3	0	1	0								
	Erysipelas... ..	1	0	0	0								
Dropsies...	Anasarca.......	1	0	3	1	1	0	3	1	4	1	0 ·455	25 ·000
	Ascites.........	0	0	0	0								
Rheumatic affections.	Rheumat. acutus et chronicus..	9	0	20	0	9	0	20	0	29	0	3 ·302	0 ·000
Venereal affections...	Syphilis primitiva..........	9	0	9	0	16	0	14	0	30	0	3 ·416	0 ·000
	,, consecutiva..	1	0	0	0								
	Gonorrhœa.....	4	0	3	0								
	Hernia humoralis...........	2	0	2	0								
Specific diseases.	Dracunculus...	6	0	2	0	7	0	2	0	9	0	1 ·024	0 ·000
	Scrophula......	1	0	0	0								
Diseases of the eye.	Morbi oculorum.........	12	0	15	0	12	0	15	0	27	0	3 ·075	0 ·000
Diseases of the skin.	Morbi cutis.. ..	35	0	28	0	35	0	28	0	63	0	7 ·175	0 ·000
	Other diseases..	57	0	49	0	57	0	49	0	106	0	12 ·072	0 ·000
	Total....	272	6	294	3	272	6	294	3	566	9	64 ·464	1 ·590

TRAVANCORE.

The following table exhibits the names, area, and population of each district, according to the census taken in 1836, amounting to 12,80,668.

Names of Districts.	Area in square miles.	Number of Villages.	Population according to the census of 1836.				Total.
			Men.	Women.	Boys.	Girls.	
Agasteesurum	97¼	59	21,306	22,486	12,847	10,873	67,512
Tovanla	120¾	51	7,471	8,332	4,283	3,652	23,738
Kulkulum	284¼	98	12,420	13,286	7,085	5,730	38,521
Irraneel		103	25,211	27,839	18,612	15,371	87,033
Vellavencode	145½	91	13,253	13,683	8,376	6,931	42,243
Neyattenkarray	213¼	104	18,089	17,859	9,182	7,418	52,610
Trevandrum South	99¼	31	9,339	9,876	4,697	3,790	27,692
Trevandrum North		33	10,302	10,510	4,677	3,831	29,320
Nedoovencaad	339½	52	6,951	6,836	3,312	2,736	19,835
Sherayenkeel	143	87	17,251	18,638	10,425	8,980	55,294
Quilon or Kolum	153½	156	19,289	20,491	11,639	10,173	61,592
Karunayapally	89	122	15,742	16,330	7,738	6,367	46,177
Kartegapally	70	71	16,272	17,445	9,704	7,902	51,323
Ambalapuley	121¼	72	16,434	17,032	8,657	6,849	48,972
Kotaurukarray	634½	176	9,093	8,853	5,094	4,178	27,218
Patanapurum		70	6,861	7,206	3,876	3,141	21,084
Kunnatore	184½	121	12,157	12,497	7.458	6,249	38,358
Manvaleekarray	1106¾	145	21,440	21,402	11,368	9,442	63,652
Chenganore		108	16,281	14,792	8,459	6,709	46,241
Tirroowalla	124¾	130	16,259	14,972	8,096	6,381	45,708
Cotayam	147	84	9,337	9,025	4,802	3,946	27,110
Changanaucherry	317½	65	11,764	11,477	6,856	5,695	35,792
Meenachel	312	72	7,818	8,021	5,468	4,661	25,968
Todupuley	534¾	67	3,553	3,602	2,086	1,931	11,172
Ehthumanore	140¼	46	11,219	11,246	5,837	5,152	33,454
Sharretalley	129½	37	16,668	18,597	10,597	9,339	55,201
Vyekum	88¾	60	10,596	10,936	5,599	3,159	21,597
Perrawam	116	96	7,166	7,673	3,599	3,159	21,597
Muanthupuley	339	140	10,969	11,419	6,718	6,050	35,156
Koonattunaad	163¾	109	9,449	9,427	5,037	4,452	28,365
Aulengaad	208½	103	8,810	9,106	5,240	4,957	28,113
Parravore	104¾	119	9,010	9,074	5,883	5,168	29,135
Shencottah including Malliankulam	64¾	27	6,976	7,708	4,560	3,656	22,900
Total	6,653½	2,908	4,14,744	4,27,673	2,38,080	2,00,171	12,80,668

Statistical Table for Tinnevelly, for the year 1837.

District.	Villages.	Hamlets.	Total.	Land Rent. Number of Ryots	Land Rent. Number of Puttahs.	Land Cultivated with Wet Grain.			Dry Grain.			Total.		
Tinnevelly														
Collectors Division														
Nelliambalum	142	84	226	4, 847	4, 847	21, 200	20	4¼	0	0	0	21, 200	20	4¼
Vedoogramum	53	55	108	2, 673	2, 673	12, 006	8	1¾	0	0	0	12, 006	8	1¾
Tencansey	68	103	171	3, 403	3, 403	18, 201	5	3¾	0	0	0	18, 201	5	3¾
Nadoomundalum	248	433	681	27, 749	27, 749	38, 011	8	3	0	0	0	38, 011	8	3
Shenkerninarcoil	33	173	206	5, 711	5, 711	19, 633	7	5½	0	0	0	19, 633	7	5½
Streevygoontum	140	273	413	7, 357	7, 357	27, 449	2	3¾	0	0	0	27, 449	2	3¾
Alvartinvevelly	36	131	167	3, 248	3, 248	20, 106	15	6¾	0	2	5	20, 106	18	3¾
Punjamahl	114	305	419	5, 148	5, 148	6, 883	6	4	0	0	0	6, 883	6	4
Chokumputty	19	106	125	2, 557	2, 557	8, 131	14	2	0	0	0	8, 131	14	2
Sub-Collector's Division														
Shermadavy	139	48	187	4, 602	4, 502	16, 074	0	6⅝	2	12	1¼	16, 076	12	7¼
Brummadasem	45	142	187	2, 936	2, 936	18, 907	6	1⅜	0	0	0	18, 907	6	1⅜
Calacaud	230	345	575	6, 384	6, 384	44, 202	11	4⅜	3	20	3⅓	44, 206	10	7⅝
Peshcush 27 Zemindaries			816											
Total	1,267	2,198	4,281	76, 515	76, 515	250, 807	18	6⅓	6	14	1⅗	250, 814	11	7¼

Statistical Table for the District of Madura, for the year 1837.

Villages.	Hamlets.	Total.	Population.			Number of Houses.	Cattle.						Means of irrigation by											Number of Fields.	Extent of land cultivated.		Ploughs.	Cultivating Inhabitants in aumanee Villages.
			Men.	Women.	Total.		Cows and Calves.	Bullocks.	Female Buffaloes.	Male Buffaloes.	Sheep.	Total.	Tanks.		River Channels.		Anicuts or Dams.		Wells.		Ponds.		Total.					
													In repair.	Out of repair.	In repair.	Out of repair.	In repair.	Out of repair.	In repair.	Out of repair.	In repair.	Out of repair.			Cawnies.	As		
4,925	2,195	7,120	1,46,856	1,43,995	2,90,851	72,110	69,029	56,005	27,555	6,978	2,70,241	4,29,808	650	104	381	14	39	11	2,450	360	2,315	0	6,324	2,61,348	1,65,599	8½	23703½	43,509

MADURA.

Table exhibiting the Number of Admissions and Deaths, in the detachment of Native Troops stationed at Madura, during a period of ten years, from 1829 to 1838 inclusive.

CLASSES.	DISEASES.	from 1829 to 1838 inclusive. Aggregate strength 1,542. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions and Deaths from each class of Disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
Fevers......	Febris ephemera	55	0	56	1	87	1	76	2	183	3	11·867	1·639
	„ intermitt quotid....	28	0	19	0								
	„ com. continua.......	4	1	1	1								
	Cholera........	5	3	12	8	5	3	12	8	17	11	1·102	61·706
Diseases of the abdominal viscera......	Diarrhœa......	16	1	29	2	33	1	47	2	80	3	5·188	3·750
	Dysenteria acuta et chronica...	5	0	5	0								
	Obstipatio......	7	0	9	0								
	Dyspepsia......	3	0	3	0								
	Hæmorrhois....	2	0	1	0								
Diseases of the Lungs	Catarrhus......	2	0	2	0	4	0	5	0	9	0	0·583	0·000
	Asthma........	1	0	3	0								
	Pneumonia.....	1	0	0	0								
Diseases of the Brain.	Epilepsia......	1	0	3	0	3	0	4	0	7	0	0·453	0·000
	Paralysis.......	1	0	1	0								
	Mania..........	1	0	0	0								
Eruptive fevers......	Varicella........	9	0	4	0	9	0	4	0	13	0	0·843	0·000
Dropsies....	Anasarca.......	0	0	2	0	0	0	2	0	2	0	0·129	0·000
Rheumatic affections.	Rheumatismus acutus et chronicus..........	24	1	27	2	24	1	27	2	61	3	3·696	5·882
Venereal affections...	Syphilis primitiva.........	9	0	12	0	19	0	24	0	43	0	2·788	0·000
	„ consecutiva.	1	0	2	0								
	Gonorrhœa.....	7	0	5	0								
	Hernia humoralis..........	1	0	5	0								
	Strictura urethræ.........	1	0	0	0								
Specific diseases.....	Atrophia........	1	0	0	0	4	0	1	0	5	0	0·324	0·000
	Dracunculus....	2	0	1	0								
	Scrophula......	1	0	0	0								
Diseases of the Eye..	Morbi oculorum........	7	0	20	0	7	0	20	0	27	0	1·750	0·000
do. „ Skin.	„ cutis.......	13	0	9	0	13	0	9	0	22	0	1·426	0·000
	Other diseases..	97	0	103	0	97	0	103	0	200	0	12·970	0·000
	Total......	305	6	331	14	305	6	331	14	639	20	41·439	3·145

Statistical Table for the District of Dindigul, for the year 1837.

Villages.	Hamlets.	Total.	Population.			Number of Houses.	Cattle.						Means of irrigation by											Number of Fields.	Extent of land cultivated.		Ploughs.	Cultivating Inhabitants in aumanee villages.
			Men.	Women.	Total.		Cows and Calves.	Bullocks.	Female Buffaloes.	Male Buffaloes.	Sheep.	Total.	Tanks.		Anicuts or Dams.		River Channels.		Wells.		Ponds.		Total.					
													In repair.	Out of repair.	In repair.	Out of repair.	In repair.	Out of repair.	In repair.	Out of repair.	In repair.	Out of repair.			Cawnies.	As		
592	2,431	3,024	1,40,426	1,37,224	2,77,650	76,162	91,398	50,061	28,264	5,458	15,5,498	3,30,679	1037	238	375	55	185	53	7,637	3,051	2,255	0	14886	129,725	1,74,639	0	21825¼	70,195

COMBACONUM.

Table exhibiting the Number of Admissions and Deaths, in the detachment of Native Troops stationed at Combaconum, during the ten years from 1829 *to* 1838 *inclusive.*

Aggregate Strength. 629 CLASSES.	DISEASES.	Admitted.	Died.	Total admissions from each class.	Total deaths from each class.	Percentage of sick to strength.	Percentage of deaths to sick treated.
Fevers........	Febris ephemera....	12	0	158	2	25·119	1·265
	,, intermitt quot.	139	2				
	,, remittens......	6	0				
	,, com. continua.	1	0				
	Cholera............	5	3	5	3	0·794	60·000
Diseases of the abdominal viscera.	Diarrhœa..........	21	1	37	1	5·882	2·702
	Dysenteria..........	3	0				
	Obstipatio..........	8	0				
	Hœmorrhois........	5	0				
Diseases of the Lungs.	Catarrhus..........	5	0	6	1	0·953	16·666
	Asthma..............	1	1				
	Mania...............	2	0	2	0	0·317	0·000
	Varicella............	1	0	1	0	0·158	0·000
	Anasarca...........	2	1	2	1	0·317	50·000
	Rheumatismus acut. et chronicus......	32	0	32	0	5·087	0·000
Venereal affections.	Syphilis primitiva...	8	0	15	0	2·383	0·000
	Gonorrhœa.........	5	0				
	Hernia humoralis...	2	0				
Specific diseases.	Dracunculus.........	1	0	3	0	0·476	0·000
	Scrophula...........	2	0				
	Morbi oculorum....	18	0	18	0	2·861	0·000
	,, cutis	34	0	34	0	5·405	0·000
	Other diseases......	82	0	82	0	13·036	0·000
	Total......	395	8	395	8	62·798	2·025

NOTE—Percentage of deaths to strength 1·271.

NEGAPATAM.

Table exhibiting the Number of Admissions and Deaths, in the detachment of Native Troops stationed at Negapatam, during ten years from 1832 to 1841 inclusive.

Aggregate strength 1819 CLASSES.	DISEASES.	Admitted.	Died.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
Fevers........	Febris ephemera....	56	0	68	2	3·738	2·941
	„ intermit quot..	11	1				
	„ com: continua.	1	1				
	Cholera...........	5	4	5	4	0·274	80.000
Diseases of the Abdominal viscera.	Diarrhœa..	5	1	33	3	1·814	9·090
	Dysenteria.	7	2				
	Obstipatio.	17	0				
	Dyspepsia...........	3	0				
	Hœmorrhois........	1	0				
Do. of the Lungs.	Catarrhus..........	11	0	19	4	1·044	21·052
	Asthma............	2	0				
	Phthisis pulmonalis	3	3				
	Pneumonia.........	3	1				
Do. of the Brain.	Paralysis...........	4	1	5	1	0·274	20·000
	Mania..............	1	0				
	Anasarca...........	1	0	1	0	0·054	0·000
Rheumatic affections.	Rheumatism : acutus et chronicus..	26	0	26	0	1·429	0·000
Venereal affections.	Syphilis primitiva ..	12	0	15	0	0·824	0·000
	Gonorrhœa.........	2	0				
	Hernia humoralis...	1	0				
	Atrophia....	1	1	1	1	0·054	100·000
	Morbi oculorum....	7	0	7	0	0·384	0·000
	„ cutis..........	27	0	27	0	1·484	0·000
	Other Diseases......	72	0	72	0	3·958	0·000
	Total....	279	15	279	15	15·338	5·376

NOTE.—Percentage of deaths to strength 0·824.

Statistical Table for the Province of Tanjore, for the year 1837.

DISTRICT.	Villages.	Total Number of Ryots.	Total Number of Puttahs.
PRINCIPAL COLLECTORS DIVISION.			
Trivady	279	12,802	12,802
Paupanapum	245		
Trivalore	399		
Keenaloore	101	413	413
Tirooterapoondy	356		
Puttoocottah	1,046	2,475	2,475
Mannargoody	350		
Nunnellum	328	1,117	1,117
Codavassel	225		
SUB-COLLECTORS DIVISION.			
Myaverum	349	1,462	1,462
Coollaullum	304	1,618	1,608
Combaconum	360		
Sheally	360	2,646	1,814
Paraullum	345	921	921
Velungamaun	278		
EUROPEAN POSSESSION.			
Nagore	280	1,451	1,451
Negapatam	36	298	298
Devicottah	37	504	345
Total	5,678		

Statistical Table for the Collectorate of Trichinopoly, for the year 1837.

	Number of Mankanum.	Villages.	Hamlets.	Total.	Gross Extent of Lands. Wet. C.	G	A.	Dry. C.	G	A.	Total. C.	G	A.
Conaud	4	182	118	300	43,540	86	8¼	85,284	17	3½	128,825	3	12
Vitticutty	8	91	265	356	14,967	40	1½	153,640	48	13½	168,607	88	15¾
Iyalore or Moosery	3	54	107	161	12,211	32	9	58,018	49	5¾	70,229	81	14
Laulgoody	15	235	55	290	31,189	82	4	67,108	68	12	98,298	51	0
Total	40	562	545	1107	101,909	41	7	364,051	81	2¾	465,961	25	9¾
Torriore	12	184	167	351	9,640	5	7¼	227,409	57	¼	237,049	62	8
Woodiarpolliam	31	338	84	422	4,211	21	14	163,774	45	5	167,985	67	3
Arrealoor	18	286	2	288	4,104	80	7¼	131,516	96	1½	135,621	76	9
Volicondapoorum	6	128	58	186	4,466	11	11¼	219,944	16	6½	224,410	28	2
Total	67	936	311	1247	22,422	19	8½	742,645	14	13½	765,067	34	6
Grand Total	107	1498	856	2354	124,331	60	15½	1106696	99	¼	1231028	59	15¾

Meteorological Observations, made at Cannanore in 1841 and 1842.

	Barometer.			Thermometer.				Amount of rain.	Number of days on which rain has fallen.	
	Mean Maxim.	Mean Minim.	General Mean.	Mean Maxim.	Mean Minim.	General Mean.	Mean daily range.	Inches.	Days.	Prevailing Winds.
January 1841	*0	0	0	85 ·2	77 ·2	83 ·5	8	0	1	Easterly and Variable.
February ,,	*0	0	0	86 ·4	78 ·4	82 ·7	8	0	0	N. E. and Westerly.
March ,,	29 ·915	29 ·878	29 ·896	87 ·9	81 ·4	84 ·7	6 ·5	0	0	N. E. and N. W.
April ,,	29 ·900	29 ·872	29 ·886	89 ·5	84 ·1	86 ·8	5 ·4	2 ·22	4	N. E. and Westerly.
May ,,	29 ·877	29 ·850	29 ·863	87 ·2	82 ·4	84 ·9	4 ·8	7 ·20	14	N. E. and N. W. W.
June ,,	29 ·848	29 ·836	29 ·842	80 ·1	77 ·5	78 ·7	2 ·6	49 ·75	29	Variable S. W.
July ,,	29 ·843	29 ·798	29 ·820	80 ·5	80 ·1	80 ·3	·4	26 ·97	28	S. W.
August ,,	29 ·892	29 ·834	29 ·863	79 ·2	76 ·9	78	2 ·3	15 ·85	24	S. W.
September ,,	29 ·873	29 ·794	29 ·833	81 ·8	81	81 ·4	·8	2 ·90	11	Variable.
October ,,	29 ·906	29 ·820	29 ·863	83 ·5	75 ·5	78 ·5	8	8 ·95	14	do.
November ,,	29 ·922	29 ·827	29 ·874	85 ·7	73 ·5	79 ·6	12 ·2	5 ·60	5	W: to N. N. W,
December ,,	29 ·904	29 ·836	29 ·870	86 ·3	73 ·5	79 ·9	12 ·8	0	0	Variable.
January 1842	29 ·968	29 ·887	29 ·927	86 ·6	73 ·8	80 ·2	12 ·8	·45	2	E. N. E. and S. S. W.
February ,,	29 ·954	29 ·871	29 ·912	87 ·6	76 ·5	82 ·5	11 ·1	·85	1	E. N. E. and W. N. W.
March ,,	29 ·924	29 ·854	29 ·889	88	76 ·8	82 ·4	11 ·2	0	0	E. N. E. and N. W.
April ,,	29 ·899	29 ·884	29 ·891	90 ·1	79	84 ·5	11 ·1	3	3	N. E. and N. W.
May ,,	29 ·860	29 ·792	29 ·826	85 ·8	76 ·1	80 ·8	9 ·1	28 ·5	15	E. N. E. and S. E.
June ,,	29 ·766	29 ·760	29 ·763	80 ·8	74 ·1	77 ·5	6 ·7	23 ·60	24	N. E. and W. N. W.
July ,,	29 ·857	29 ·807	29 ·832	80 ·2	73 ·2	76 ·7	7	26 ·70	25	N. W. and W. N. W.
August ,,	29 ·872	29 ·807	29 ·839	78 ·6	72 ·7	75 ·6	5 ·9	19 ·20	28	N. W.
September ,,	29 ·880	29 ·798	29 ·839	80 ·5	73 ·5	77	7	9 ·95	19	W. N. W. and S. E.
October ,,	29 ·900	29 ·850	29 ·875	83 ·4	74 ·3	78 ·8	9 ·1	3 ·35	7	W. N. W.
November ,,	29 ·937	29 ·854	29 ·895	85 ·1	72 ·5	78 ·8	12 ·6	1 ·30	6	E. S. E. and E. N. E.
December ,,	30 ·003	29 ·913	29 ·958	86 ·3	68 ·9	77 ·6	17 ·5	0	0	S. S. W. and E. N. E.

* No Observations made during these two months.

Statistical Table for the Province of Malabar for the year 1836.

	TALOOKS.	Number of Villages.			Total Population.			Number of Ploughs.	Cattle.	
		Mouzah or Hobelies.	Umshoms.	Mouzarah or Dishooms.	Males.	Females.	Total.		Bullocks, Cows and Buffaloes.	Sheep and Goats.
1	Cavay	9	22	158	32,012	28,781	60,793	4,042	26,643	272
2	Cherikul	11	21	118	31,344	30,084	61,428	2,738	17,817	260
3	Tellicherry	17	27	218	35,200	35,211	70,411	6,267	28,197	839
4	Cartenaad	11	31	146	30,241	28,830	59,071	3,916	20,647	439
5	Koormenaad	12	35	265	41,009	37,519	78,528	5,052	32,693	180
6	Calicut	12	31	128	41,548	37,152	78,700	3,692	16,345	485
7	Ernaad	10	27	164	37,871	33,279	71,150	7,759	37,785	841
8	Shernaad	11	23	116	36,569	31,894	68,463	6,543	27,628	862
9	Betutnaad	13	30	194	43,081	38,899	81,980	8,147	29,552	1,055
10	Kootnaad	7	21	162	28,925	27,253	56,178	5,000	17,760	956
11	Chowghaut	7	24	165	44,449	40,363	84,812	3,366	17,134	1,164
12	Nedinganaad	17	42	334	49,196	46,858	96,054	12,061	47,862	2,097
13	Wolloowanaad	12	27	199	33,744	30,266	64,010	13,468	49,477	1,232
14	Palgaut	12	33	126	51,248	47,518	98,766	8,837	31,176	2,301
15	Tunalpooram	11	24	51	31,017	29,655	60,672	6,441	25,385	1,433
16	Wynaad	9	16	67	16,470	16,977	33,447	5,384	29,439	46
17	Cochin	0	0	0	4,114	4,346	8,460	0	0	0
18	Mahe Hobby	1	1	4	992	1,030	2,022	75	390	18
19	Neilgherry	0	0	39	2,984	2,987	5,971	403	6,867	291
	Total....	182	435	2,6,54	5,92,014	5,48,902	11,40,916	1,03,191	4,62,797	14,771

Statistical Table for the Province of Canara for the year 1836.

TALOOKS.	Extent in square miles.	Population.			Cattle.					No. of ploughs.	No. of estates.	No. of Beriz Pattahs	No. of Moganies.	No. of Villages.	No. of Houses.	No. of Devostanums, Banksalls, Ware-houses, Shops, &c.
		Males.	Females.	Total.	Cows.	Bullocks.	She buffaloes.	He buffaloes.	Total No. of Cattle.							
Mangalore......	240	50,183	47,221	97,404	15,727	19,555	2,735	16,546	54,563	14,512	7,356	7,356	29	196	18,394	2,119
Bekul..........	1250	65,252	63,816	1,29,068	35,416	45,147	7,776	16,480	1,01,819	16,785	11,914	11,914	24	242	24,111	1,489
Buntwal........	1650	52,724	47,682	1,00,406	31,723	40,652	8,776	15,755	96,906	18,554	11,519	11,519	38	394	20,589	3,209
Oodipsy........	400	36,934	34,177	71,111	16,471	21,553	2,110	11,928	52,062	13,024	6,924	6,924	16	126	13,051	1,093
Barcoor........	450	37,058	35,833	72,891	18,511	22,804	2,591	13,336	57,242	15,548	5,961	5,961	17	135	12,803	1,313
Cundapoor.....	432	37,669	35,098	72,767	17,273	24,542	3,398	9,823	55,036	12,004	6,297	6,297	24	190	14,437	1,591
Honawer.......	832	38,733	34,287	73,020	16,450	17,482	5,463	4,804	44,199	8,556	7,337	7,337	16	192	13,178	1,327
Ankela.........	450	29,560	26,543	56,103	11,481	13,722	2,530	4,114	31,847	6,162	7,026	7,026	10	139	10,424	1,016
Soopah.........	2052	19,022	17,232	36,254	14,542	15,712	6,331	5,365	41,950	7,047	6,192	6,192	11	267	8,446	750
Sonda..........	900	22,710	19,044	41,754	15,512	16,705	6,468	3,594	42,278	4,058	4,305	4,305	19	327	8,370	706
Bilghi..........	256	9,591	7,751	17,345	5,403	5,945	2,050	623	14,021	1,720	1,437	1,437	13	74	3,345	250
Total....		3,99,439	3,68,684	7,68,123	1,98,509	2,43,819	50,228	1,02,367	5,94,923	1,17,970	76,268	76,268	217	2282	1,47,148	14,863